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ABSTRACT

This report contains five papers with discussions identifying policy and research issues in rural labor markets, assessing the adequacy of existing data and theories for researching these issues, and assigning priorities to research questions. The papers focus on rural economic goals, market linkages with metropolitan, national, and international economies, and the federal government's role in rural labor markets. A paper on rural labor market performance considers successes/failures of government intervention in altering labor market performance and asserts that underemployment is the appropriate indicator of labor market performance in rural areas. Another paper traces implications of industrial and occupational restructuring, finding substantial inequalities between metropolitan and nonmetropolitan labor markets and between males and females within those markets. A third paper reviews usefulness of regional growth and industrial location theories for understanding uneven distribution of growth across rural labor markets. A fourth paper examines linkages between local labor markets and the national/international economy and a fifth reviews ways in which government interventions work at cross purposes in rural labor markets. A summary chapter emphasizes diversity, measurement issues, complexity of affecting forces, and research/policy implications of local labor markets. Tables and figures accompany the papers. A participant list is included. (LFL)

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ABSTRACT

This report contains papers and discussions presented at the Economic Research Service meeting in Washington, D.C., October 17-18, 1985. This meeting focused on rural economic goals, market linkages with metro, national, and international economies, and the Federal Government's role in rural labor markets. Researchers and academicians presented different views on economic needs of employment and policy for rural areas.

Keywords: Rural labor, market research, economic goals, Government role, labor policy.

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The symposium on which this proceedings publication is based was sponsored by the Agriculture and Rural Economics Division of the Economic Research Service. James Schaub and Robert Coltrane planned and organized the symposium. Jackey Brown performed a masterful job in preparing the manuscript for publication, with the invaluable assistance of Blenda Gately.

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INTRODUCTION

The American economy has experienced dramatic changes over the past 15 years. The energy crisis, the rapid development in computer technologies, the sluggish growth of manufacturing in the face of foreign competition, the rise in two-earner families, the boom and bust in agriculture, the expansion of the service sector, and most recently, the fall in oil prices have together resulted in a constantly changing economy.

These national and sectoral trends have often been felt much more strongly in some areas of the country than in others. Some areas have prospered because of the boom in electronics; others have faced high unemployment as apparel and textile firms moved their operations abroad. Rural labor markets, with their specialized industrial structures, and small, widely scattered labor forces, seem to have been most affected and least able to adapt to changes in the economy. Since the late seventies, unemployment in nonmetropolitan areas has been consistently higher than metropolitan unemployment. Moreover, while the data are sparse, they indicate that official figures underestimate the extent of unemployment and underemployment problems particular to rural areas. Changes in the character of Government programs, reductions in the level of public support, and industrial relocations and deregulations are having uncertain effects on local employment and unemployment problems.

With these considerations in mind, the Agriculture and Rural Economics Division of the Economic Research Service sponsored a symposium on "Rural Labor Market Research Issues" in October 1985. 1/ The symposium brought together a group of researchers, from a variety of disciplines, interested in promoting an exchange of ideas, interests, and concerns about rural labor markets. The purpose was to identify important policy and research questions relating to rural labor markets.

To stimulate discussion, five experts from a variety of disciplines were invited to present papers at the symposium. They were asked to identify major research issues pertaining to rural labor markets, to assess the adequacy of existing data and theories for researching these issues, and to assign a priority to the research questions identified. Each paper was followed by comments from one of the ERS researchers working on the Rural Labor Markets Performance project, and then by open discussion from the audience. These papers, the comments, and a summary chapter that highlights the major recurring themes from the symposium are collected here with the expectation that the questions raised and the insights offered will help to stimulate further interest and research on this topic.

The symposium was organized around four major themes: efficiency and equity; growth, stability, and adaptability; linkages with national and international economies; and the role of public policies and programs. Luther Tweeten, an agricultural economist at Oklahoma State University, and Marta Tienda, a sociologist at the University of

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1/ James Schaub, an economist at ERS, was the symposium organizer and presider.

Wisconsin, were asked to write and present papers on efficiency and equity issues as they relate to rural labor markets.

Ideally, labor markets are efficient; people are allocated to jobs in such a way that productivity is maximized. As Tweeten points out, however, the efficient allocation of people to jobs sometimes results in a distribution of jobs and incomes that may be considered "unfair" or inequitable. In other words, an efficient labor market does not guarantee a job for each person seeking work, nor does it ensure a "living wage" for everyone.

In his paper, Dr. Tweeten discusses the successes and failures of various government interventions in altering the performance of labor markets. He maintains that in many instances Government programs designed to increase equity in the labor market have reduced incentives to work and thereby have resulted in a loss of efficiency. He also calls for improved measures of labor market performance. He asserts that the current measure of unemployment, often used to indicate labor market performance as well as economic hardship, is unsatisfactory, particularly in rural areas. He suggests that a more appropriate indicator would be a measure of underemployment.

Dr. Tienda's paper focuses primarily on the implications of industrial and occupational restructuring for earnings inequalities between metropolitan and nonmetropolitan labor markets and between males and females within these two types of markets. She finds substantial inequalities for both comparisons, even when differences in the industrial and occupational distributions are controlled. In fact, although there has been a striking convergence in the industrial and occupational structures of metropolitan and nonmetropolitan labor markets since 1960, there has not been a corresponding reduction in the earnings gap between males and females within metropolitan and nonmetropolitan labor markets. Tienda also proposes an analytical technique to examine how long-term changes in the industrial and occupational structures result in inequalities of opportunities and earnings for various groups within and between labor markets.

The second major area covered in the symposium (growth, stability, and adaptability in rural labor markets) was addressed by Steven Kale, an economic geographer at Oregon State University. During the sixties and early seventies, employment and population grew faster in rural areas than in urban areas. This growth, however, was not evenly distributed across all rural labor markets. Employment remained stable in some rural labor markets and declined in others during this period of general prosperity. Similarly, the impact of the recession and recovery of the eighties has been distributed unevenly. Kale reviews the usefulness of various theories of regional growth and industrial location for understanding this uneven distribution of growth across rural labor markets. He examines recent empirical findings about the nature of this growth which suggest the increasing importance of emerging national and international economic trends for rural labor market performance.

The linkages between local labor markets and the national and international economy are the focus of the fourth paper in this collection, written by economist Brady Deaton at Virginia Polytechnic

Institute and State University. Deaton emphasizes the importance of the internationalization of the economy, recent technological changes, and the growing farm/nonfarm interdependence for rural residents. Because rural labor markets tend to be small and to specialize in only a few industries, they are particularly vulnerable to such international economic forces as foreign competition or foreign direct investments. Throughout the paper, he stresses the need to include these "local" effects on rural labor markets in evaluating the potential costs and benefits of various national macroeconomic policies such as protectionism and deregulation.

In addition to their indirect influence on rural labor markets through macroeconomic policies, Federal and State governments have a more direct influence through local development and unemployment programs. However, as Vernon Briggs, an economist at Cornell University, points out in the final paper, the various direct and indirect roles played by Government sometimes work at cross-purposes. He contends that recent policies designed to bolster the national economy have adversely affected rural economies. He suggests that education and training programs will be of little use in a local labor market without sufficient jobs, and that job growth will provide few benefits to the local economy if the local labor force does not have the skills necessary to fill those jobs. In this age of budget cuts and the decentralization of many government programs, Briggs claims that it is increasingly important to ask how government policies and programs can be integrated most effectively to support local areas.

These five papers frequently overlap and complement each other (there are some disagreements as well.) The issues confronted are timely and important, the ideas offered are insightful and stimulating, and the questions raised are many and often difficult. It is hoped that the variety of perspectives presented here will encourage further interdisciplinary discussion of and research on the nature of rural labor markets in the United States.

I. Market Performance— Efficiency and Equity

RURAL LABOR MARKET PERFORMANCE

Luther Tweeten [1]

This paper examines rural labor market performance as apparent in economic efficiency and equity in public manpower and related policies. Also of concern is private labor market performance and the role of the public sector in improving that performance. Data system improvements to gauge labor market performance are suggested. Several manpower programs are reviewed for their contribution to economic efficiency and equity.

Principal economic problems of rural areas are poverty and underemployment. Many of the poor are aged and disabled individuals whose incomes can be raised to at least government cost by transfer payments. Earnings of many others with low incomes can be raised to at least public cost by human resource development programs of education, training, and job search assistance. Results of Federal efforts to bring jobs to people through loans, grants, technical assistance, and planning of the Economic Development Administration (EDA) and Farmers Home Administration (FmHA) have been disappointing. Early "worst first" efforts of EDA were reasonably cost-effective in creating jobs. However, funding of EDA as well as FmHA business and industrial loans was always too modest and diffused to have much impact (Tweeten and Brinkman, 1976, ch. 14).

EDA, in its struggle for political survival, eventually spread its job development efforts so thinly among areas that a critical mass of resources for development was seldom assembled. "Worst first" has long been abandoned. Urban areas disproportionately have absorbed EDA efforts and farmers disproportionately have absorbed modest FmHA efforts to create jobs for rural people. Meaningful targeting of job creating efforts of EDA, FmHA, or urban enterprise zones extended to rural areas on the basis of underemployment appears to be out of the question in the foreseeable future. It follows that public efforts to reduce underemployment in rural areas may largely come through manpower and other human resource development policies rather than through industrialization policies.

Setting and Perspective

If rural and urban areas faced precisely the same manpower problems and opportunities, a symposium would be unnecessary to help establish an agenda for studying rural labor market performance. But labor force problems and opportunities differ between rural and urban areas. It is not possible simply to apply the extensive existing manpower research results for urban areas to rural areas.

Compared with urban counties, rural counties display several distinctive features:

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[1] Luther Tweeten is a Regents Professor, Department of Agricultural Economics, Oklahoma State University, Stillwater. This presentation is based on a professional paper of the Oklahoma Agricultural Experiment Station. Comments of Dean Schreiner and Daryll Ray are much appreciated.

(1) Rural counties on the average have lower per capita income, higher poverty rates, higher dependency rates, and lower labor force participation rates. Nonmetro areas have lower proportions of school-age youth in school (Nilsen, 1981) and lower proportions of persons in professional, technical, managerial, and administrative occupations.

(2) Rural counties have lower rates of population and employment growth. In the seventies, population and employment grew faster in rural than in urban counties. This departure from the historic pattern undoubtedly helped divert public attention from rural problems. With return to slower rates of growth in population and employment in rural than in urban areas in the eighties, it is appropriate to reexamine issues in rural manpower and economic policy.

(3) The most notable distinguishing feature of rural areas is population dispersion. Sparsely populated areas offer environmental and other amenities sought by many Americans but pose unique problems in providing quality community services at low cost per capita. Economies of size characterize many manpower as well as other services. Finding an appropriate level of rural services and paying for them is a continuing challenge.

(4) Industrial composition of rural counties is increasingly becoming like that in urban counties, but rural counties continue to depend disproportionately on extractive and natural resource based industries such as farming, forestry, and mining. These industries along with manufacturing, now the largest single basic industry in rural areas, have been characterized by slow growth or decline, creating community adjustment problems. In part because farming continues to be dominated by large numbers of family-sized operations while small towns are dominated by small family businesses, self-employment is approximately twice as frequent in rural areas as in urban areas.

Because of these unique rural characteristics, many national manpower policies designed for urban areas do not work well for rural areas.

Efficiency in Labor Markets

Participants in labor markets measure efficiency in different ways. A potential worker might define an efficient labor market as one providing a steady, pleasant job immediately and at high pay to anyone who wants to work. A potential employer might define an efficient labor market as one always supplying plenty of steady, industrious, and skilled workers at low pay. Conflicting labor market needs of workers and employers must be reconciled.

In neoclassical economic terms, an efficient labor market is defined as one in which job seekers search for jobs and employers search for workers until marginal costs of additional search just equal marginal returns. An efficient market is free of arbitrary restraints such as race, sex, or religious bias. Market failure such as divergence between social and private marginal costs (or returns) can be corrected by public intervention for a net social gain, if that public intervention provides benefits in excess of costs incurred. An efficient labor market would be apparent in equal pay for equal work with exceptions for transfer costs. In short, an efficient market moves industry to where labor costs are low and moves workers to where labor returns are high until resources are used efficiently throughout the Nation.

Equity in Labor Markets

An efficient labor market is not necessarily equitable in providing justice or fairness to everyone. In an efficient labor market, workers are paid their marginal product. Those who bring little or no human resources to the market can bring little or no earnings home. Because talents are somewhat randomly spread across the Nation, a well-functioning market would eliminate regional and sectoral poverty. Individual or family poverty, called "case poverty" by John Kenneth Galbraith, would persist. Structural unemployment, perhaps 4 percent of the work force, also would persist because it is efficient to spend time searching for work that best utilizes one's capabilities.

Equity-Efficiency Tradeoff and Compromise

An equitable labor market always would provide a decent job at a decent wage to anyone who wants one. A corollary is that a worker need not be productive in such a market because the worker is assured of a job regardless of performance. Nations singularly pursuing equity in national labor policies have sacrificed so much efficiency that they have found it necessary to restore some incentives.

Although no government has pursued for long either pure efficiency or pure equity, all governments intervene in labor markets to some degree. At issue is how to identify an appropriate degree of intervention. The term "appropriate" requires a norm of performance. The norm here is a labor market that contributes most to well-being of society. Such an allocation can be expressed by what I call novoclassical economics. Such economics is basically the competitive neoclassical model for efficiency with the added proviso that the marginal utility of income or resources be equal among all individuals (see Tweeten, 1979, ch. 16).

Estimates (Tweeten, Mylay, and Dellenbarger, 1985) indicate that, compared with a family with national median income, a family without income derives 40 percent more satisfaction from another dollar of income, a family with half the median income derives 20 percent more satisfaction, and a family with double the national median income receives only 60 percent as much satisfaction from another dollar of income. Thus, a Federal project with a conventional benefit-cost ratio of 1.2 and transferring costs and benefits among those with median family income provides the same contribution to well-being of society as a project of the same magnitude merely transferring income from taxpayers with national median income to recipients with family median income half the national average. Thus, market interventions can increase well-being where individuals or families have inadequate resources to earn a socially acceptable income or where market imperfections interfere with efficient and equitable allocations. Many past manpower policies undoubtedly have been motivated by some vague notion of equity-efficiency tradeoff less formal than the framework mentioned earlier, but with good intentions of increasing well-being of people.

Private Market Performance

A considerable body of evidence indicates that individuals and firms have responded to economic incentives. Massive movement of labor from farms and growth of manufacturing employment in rural areas of the South are examples. Workers have adjusted to occupations and regions where labor earnings are highest and firms have formed, moved to, or expanded in industries and regions where returns are most favorable. Once large differences in labor and capital earnings among regions have been substantially reduced. Major adjustments in the U.S. economy have been the result more of private incentives and decisions than of public incentives and decisions. However, public investments in education, research, and welfare programs have played an important role.

On the whole, the private market receives high marks for its performance in directing workers and jobs to where returns are highest. But it is critical to recognize the limitations of the market. Market participants respond to private incentives; where private incentives differ from social incentives, markets will not allocate to bring outcomes that bring the greatest well-being to society. The market alone will not meet the needs of those who, have few or no resources to bring to the market. An appropriate public policy is to use the efficiency of private markets to the greatest extent possible but to supplement the market where necessary to align private with social incentives and provide for the disadvantaged unable to earn a socially acceptable income. Of course, care must be taken to avoid public interventions that entail greater social cost than did the market failures which the interventions were designed to correct.

The principal focus in the study is on measures of labor market performance and public interventions designed to improve that performance. My conclusion is that public general education, research, and welfare programs have had a large and generally positive socioeconomic impact but that public labor force policies of job placement, vocational-technical training, industrialization incentives, and other programs for disadvantaged workers have had, at best, a mixed record. In part, the problem has been inadequate planning, administration, funding, and information. In part, the problem has been overly optimistic notions of what public policies can accomplish at favorable social-benefit cost ratios even under the best circumstances.

Finally, a "level playing field" in the form of sound macroeconomic and trade policies is required for private markets to function well. For example, agriculture, mining, lumbering, and textile industries, which made large adjustments in past decades to approach an economic equilibrium again face extremely difficult economic circumstances in the eighties partly because of high real interest and exchange rates brought on by large structural deficits of the Federal Government.

Much of the remainder of this paper examines equity and efficiency dimensions of past public labor force programs. We shall note that data often are inadequate or nonexistent to determine the payoff from programs, especially for rural areas. Two principal points are addressed: (1) appropriate indicators of labor market performance, and (2) success of past labor market interventions.

Data Needs

This section outlines selected data needed to measure performance of labor and other resource markets in rural areas. In some instances, data are unavailable. In many other instances, data are available but miss the mark in measuring the appropriate concept.

Underemployment

In the late seventies, over $17 billion of Federal funds were allocated annually among areas according to criteria of unemployment levels or rates (Nilsen, 1980, p. 528). Unemployment, measured by number of persons 16 years old and over actively seeking work, inadequately measures the need for public labor force services or for economic development in rural areas. Unemployment statistics imperfectly measure economic hardship and labor market performance. With multiple-earner families now commonplace, with unemployment insurance, and with availability of superior alternatives such as poverty to measure need, unemployment is an inadequate measure of economic hardship.

At issue is how well unemployment measures labor market performance, especially in rural areas. The issue has two dimensions: Is unemployment as currently defined the correct concept to measure underutilization of human resources? If the proper concept, is unemployment measured with tolerable accuracy? The answer is no to both questions.

First consider accuracy. The Current Population Survey (CPS), a national sample taken monthly to determine unemployment rates, provides statistically reliable estimates of the unemployment rate for some Standard Metropolitan Statistical Area (SMSA) but is unreliable for specific rural areas. Unemployment is computed on a residual for rural (non-SMSA) areas at the national level. The residual method does not work for many States and counties. Using the complex "Handbook Method," the Bureau of Labor Statistics (BLS) calculates unemployment rates for nonmetropolitan counties from CPS data supplemented by information from unemployment insurance claims and other sources.

The procedure substantially underestimates unemployment. A comprehensive personal interview survey in Gadsden County, Florida, found 20 percent of the labor force unemployed compared with the official unemployment rate of 9.2 percent (Korsching and Sapp, 1977, pp. 2, 3). In a recent study, 1,861 randomly selected households were surveyed in eight counties in the lowest income pocket of Iowa (Cole, June 1984, pp. 9-11). The official unemployment rate for the week of the survey (March 1983) was 6.5 percent; the special survey showed a rate of 17.5 percent for the same week. If these two studies (which used questions patterned after those in the CPS) are reliable, the official "Handbook Method" underestimates rural unemployment by 50 percent or more. Such bias shortchanges rural counties in allocation of public programs.

Even if unemployment were measured accurately in rural counties, it would be an inadequate measure of underutilized human resources and need for remedial programs for at least five reasons:

(1) Relatively immobile but potentially productive rural workers often are discouraged and do not seek gainful employment because of chronic lack of local jobs. Although not gainfully employed, they are not classified as unemployed.

(2) Rural workers face few employers so that costs of additional job search are large relative to likely gains after a comparatively short time spent inventorying potential job openings.

(3) Rural workers classified as employed are often underemployed because the incidence of low-paying seasonal work and self-employment is high. The self-employed need work only 1 hour during the survey week to be classified as employed, a condition met by virtually all self-employed persons, however low their earnings. The part-time farmer may simply fall back on the farm when the nonfarm job terminates, even though farm earnings are small.

(4) The incidence of jobs covered by unemployment compensation is low in most rural counties.

(5) The Job Service office for rural residents is likely to be some distance away in a metropolitan area.

The likelihood of registering for a job or applying for unemployment compensation and hence for being recognized as unemployed is low in the above circumstances.

Detecting the need for or focusing manpower services is difficult without improved measures of labor market performance. A place to begin is with measures of underutilized labor as apparent in underemployment. Two broad approaches have been used to measure underemployment. One approach is to supplement traditional unemployment data with information from the CPS or Census of Population. An example is the Labor Utilization Framework (LUF) first proposed by Philip Hauser, extended by Teresa Sullivan, and presented with considerable theoretical and empirical detail by Clifford Clogg. Underemployment was classified by Clogg (1979, pp. 9, 10) into five categories as follows:

(1) Subunemployment, defined as discouraged potential workers not currently employed or actively seeking employment but who would like gainful employment.

(2) Unemployment, the conventional measure of those without work but actively seeking it.

(3) Part-time employment or part-time unemployment, workers who are employed part-time but would like full-time employment.

(4) Underemployment by low income, workers employed whose earnings are below the poverty threshold.

(5) Job mismatch, workers fully employed as measured by time spent but inadequately employed because their skill attainments are considerably greater than the skill requirements of their jobs.

These categories offer advantages for decomposing underemployment into its sources but have several disadvantages. The categories inadequately account for the self-employed, unpaid family workers, agricultural workers, and secondary earners in families. Most agricultural work is not easily defined in terms of time spent in employment, income received from work, or skill requirements.

Clogg provided detail on underemployment by year, age, sex, and race but not by sector. Underemployment estimates were provided by Marshall (1974, pp. 80, 81) by sector. He concluded that:

> Although the unemployment rates were roughly the same in metropolitan and nonmetropolitan areas, the nonmetropolitan subemployment rate was much higher for males; the male metropolitan subemployment index was 4.6 times the unemployment rate, but the same ratio for nonmetropolitan males was 6.1.

Nilsen (1980, pp. 506-509) described seven measures of employment status, including the official unemployment rate U-5, computed by the BLS from the CPS. The most comprehensive series, U-7, includes the total number of full-time jobseekers, plus half the number of unemployed seeking part-time work, plus half those working part-time for economic reasons plus discouraged workers. The subemployment rate is the above subemployment number expressed as a percentage of the labor force plus the unemployed and discouraged workers. Although the discouraged worker category is important, BLS had serious reservations about that category "...because insufficient information is collected from the CPS to develop an objective measure of these persons' interest in employment" (Nilsen, 1980, p. 509). Discouraged workers comprised only 0.9 percent of the labor force in metropolitan areas and 1.1 percent of the labor force in nonmetropolitan areas as shown by Nilsen from CPS data for 1977. The rates were only a fraction of those estimated by Marshall (1974, p. 81) for 1970 from U.S. census data.

In short, CPS data provide considerable detail to estimate components of underemployment on an annual or even quarterly basis. But CPS derived underemployment data are subjective and underestimate the number of discouraged workers.

A second general approach is to measure underemployment based on economic calculations of earnings in any given rural area in relation to normal earnings. The latter are established from nationwide standards based on age, sex, education, experience, and other variables. Rowe and Zimmer (1977) of the Economic Research Service of the U.S. Department of Agriculture estimated a Manpower Economic Utilization Index (MEUI) providing detail down to the county level by sex, race, and sector. The MEUI is based on earning capacity rather than employment. National median income is adjusted for the local structure of age, educational attainment, employment status, labor force status, occupational structure, and work experience in relation to national norms to determine warranted income. In effect, warranted income assumes that local residents identified by age, education, and other characteristics would earn the median income reported for their counterparts in the national data if markets functioned well. MEUI for a county is its actual median income expressed as a percentage of its warranted median income.

With refinements in concepts and data, MEUI has much potential to measure underemployment (see Tweeten, 1980, pp. 550-555). One argument against use of this underemployment measure is its current availability only for census years. The counter argument is that programs geared to changing long-term supply and demand for labor in an area do not need a sensitive allocative criterion that changes frequently. Furthermore, benchmark estimates from CPS and other sources (perhaps a Census of Population taken every 5 rather than 10 years) can provide the needed updating of underemployment statistics.

The literature details the advantages and disadvantages of various measures of underemployment. Continuing conceptualization is useful, but the time has come for the Agriculture and Rural Economics Division (ARED, formerly Economic Development Division of the Economic Research Service, USDA) to assume leadership in assessing various measures of underemployment and testing their suitability to meet rural needs.

Underemployment estimates help to measure labor market performance and the need for manpower services but are less important to allocate Federal funds than in the seventies. That is because several programs allocated partly by unemployment have diminished or terminated. Examples include programs of the Comprehensive Employment and Training Administration (CETA), general revenue sharing, and the Economic Development Administration.

Poverty, Income, and Wealth

Major data gaps exist in farm income and wealth data, although such data are more complete than for other rural industries. National farm income data are designed to meet needs of national income and product accounts rather than to measure the well-being of farm people.

Bawden and others (1977, p. 91) stated nearly a decade ago that

> A clear picture of the economic position of persons engaged in farming requires data on the level and distribution of personal disposable income and wealth by various categories including type of farming, tenure, economic sales class, time spent farming, age, education, and geographic region. Finally, theory and empirical evidence points to variability of income and wealth as an important dimension of satisfaction.

> ...how many poor people are engaged in farming, and what are their key sociodemographic characteristics? Do poor farm families shift from a low-income to a more favorable income position from one year to the next? How do returns to part-time farming differ by type of farm and geographic region? How are capital gains from real estate distributed by family income level, tenure, and economic sales class? Combined with data on age and education, this information will permit us to monitor the economic well-being of farm families and to evaluate the performance of programs to assist farm people.

Data on personal income of farm and other rural families by size and type of farm need to be adjusted for in-kind payments as well as wealth, adjustments of special importance in determining poverty. Off-farm income data of farm people are inadequate especially at the State and county levels.

Cost of Living Differences Among Areas

It is impossible to measure labor market performance, particularly using the MEUI approach, without reliable measures of buying power in rural areas.

The Panel on Statistics for Rural Development Policy stated:

> Meaningful comparisons of economic well-being among communities, regions, and program target groups require that wages, salaries, income, net worth, transfers, outlays, taxes, and other dollar indicators be expressed in comparable units. Often this means deflating series for the cost of living among regions and sectors. Meaningful measures of labor, industry, and capital market performance also require data adjusted for cost-of-living differences among regions and sectors.
>
> (Gilford and others, 1981, p. 134)

Standard Rural Statistical Areas

Standard Metropolitan Statistical Areas (SMSA's) are used extensively for statistical purposes. For various reasons, including higher costs per unit of data collection, the "balance of state" or nonmetropolitan data are simply State totals less SMSA totals. Manpower data reported on that basis provide neither detail nor reliability.

Because of economies in data collection, analysis, and reporting, it is sometimes feasible to collect and supply data for rural areas (multicounty districts) that could not be provided at acceptable cost for each rural county. Standard Rural Statistical Areas (SRSA's) would be rural counties but otherwise would be treated much as SMSA's are treated for statistical purposes.

The Panel on Statistics for Rural Development Policy supports this concept:

> Procedures for obtaining, analyzing, and reporting data should be developed to provide data for rural people and problems that are comparable in scope and reliability to those for SMSAs.

> Designation of standard statistical areas (SSAs) encompassing the entire geographic area of the nation would provide continuous, inclusive, and systematic data based on boundaries that would be changed less frequently than the presently relaxed SMSA criteria. The SSAs would be delineated in cooperation with states, conforming where possible to substate planning and development districts, but encompassing more than one such district when necessary to meet the statistical reliability standards now used for SMSAs. Delineations would consider nodal and homogeneous areas as used in designation of substate districts. The procedure would preserve the building-block approach for county data with appropriate urban orientation codes to facilitate analysis of county differences within rural SSAs as well as among rural and urban SSAs. If continued use of the label "SMSA" is deemed useful for an urban subset of the SSAs, the rural SSAs could be labelled standard rural statistical areas (SRSAs).
> (Gilford and others, 1981, p. 196)

Counties in each SRSA grouping would be contiguous and would not be grouped into homogeneous categories of the "urban-orientation" classification now used by the Agriculture and Rural Economics Division. The two approaches serve different purposes and complement rather than compete in meeting information needs regarding rural areas.

Conclusions

It is not possible to list all the data needed to measure labor market performance of rural areas. References such as those cited above constitute a rich source of information.

Many questions remain that better manpower data can help to answer: Do financial and real capital markets function well to equalize returns adjusted for unique local circumstances? Do minimum wage laws, regulations imposed by organized labor, and local government policies interfere with efficient market allocation? To what extent do lack of knowledge, tradition, home ties, spouses, discrimination, and rural amenities slow economic adjustment of human resources and create chronic resource disequilibrium among rural areas and between rural and urban areas?

Earnings differ substantially among groups classified by race, sex, and sector (Tweeten, October 1980, p. 10). To know why, we need more refined estimates of earnings profiles for various groups and adjusted for sociodemographic characteristics.

Appraising Performance of Labor Market Interventions

ARED has capabilities not only to analyze regularly reported statistics but also to keep abreast of manpower policy performance, particularly as it relates to rural areas. A principal reason for doing so is because no other agency is doing so.

Manpower policies have a reputation for urban bias. Sometimes this means that programs are solely for urban areas; other times this means that national programs are never evaluated for their impact on rural people or areas. One purpose of this section is to inventory past manpower policies to determine implications for rural areas, as well as for ARED activities.

Distributional Overview

The distribution of Federal training and employment funds by urban orientation of counties is shown in table 1. Rural (nonmetropolitan) counties accounted for approximately 28 percent of the Nation's employment and population in 1980 but received only 13 percent of the Federal funds for employment and training. A major reason for the low percentage is because rural people go to metro counties for training; economies of size preclude having facilities in every rural county. Yet, funding for various programs appears to be unduly concentrated in metro counties.

U.S. Department of Agriculture and U.S. Department of Interior programs are disproportionately in nonmetro counties but the programs and funding are small. U.S. Department of Labor programs were largest and 88 percent of funding for these programs was in metropolitan counties. Although the Employment Service has been criticized for not serving rural workers, Federal funding for the program is less metro oriented than is any other Department of Labor program. The U.S. Job Corps is somewhat nonmetro oriented in funding because many facilities are in rural settings. Enrollees, however, are largely from metro counties.

The Public Employment Service

Provision of job information and a clearinghouse to match job seekers and employers has some properties of a public good that the market operating alone will not provide in efficient quantity. Private firms may have difficulty appropriating benefits of job information made available to all workers and employers. Also, only one private agency is able to operate efficiently to provide a job clearinghouse at acceptable cost per unit in some local labor markets. Such a natural monopoly, if not publicly operated, may require public regulation to avoid excessive charges to customers. Nonetheless, arguments for public provision of job services are not strong enough to warrant providing such services without careful attention to benefit-cost ratios and appraisal of alternative job service delivery systems, especially in rural areas.

Operation of Employment Services (ES, also known as Employment Security Offices or Job Services) in 2,600 locations throughout the country is the responsibility of State governments but with funding by Federal grants to States. Federal legislation establishing the employment service in 1933 focused on overcoming labor market imperfections in matching workers to jobs and in overcoming skill shortages. Beginning with the war on poverty in 1964, the emphasis shifted to labor initiatives targeted at minorities, welfare recipients, and low-income youth. Fairly comprehensive programs providing training as well as job market information include the Manpower Development and Training Act (1962), the Economic Opportunity Act (1964), the Comprehensive Employment and Training Act (1973), and the Job Training Partnership Act (1982). In constant 1983 dollars,

Table 1—Distribution of federal funds to metro and nonmetro counties, fiscal year 1980

Agency and program 1/	Type 2/	United States	Metro counties	Nonmetropolitan counties: Total	Urbanized: Adjacent	Urbanized: Nonadjacent	Less urbanized: Adjacent	Less urbanized: Nonadjacent	Totally rural: Adjacent	Totally rural: Nonadjacent
		Million dollars	Percentage of U.S. total							
Population distribution, 1979	—	—	72.0	28.0	7.1	3.9	6.8	6.8	1.2	2.3
Training and employment	—	8581.8	86.8	13.2	6.2	2.0	1.3	2.5	.2	.9
Department of Agriculture	—	106.0	24.1	75.9	10.6	4.9	11.4	26.3	1.6	21.1
Employment & training R&D projects, FmHA	PG	2.0	0	100.0	0	0	50.0	50.0	0	0
Employment and training assistance 3/	CP	104.0	24.5	75.5	10.8	5.0	10.6	25.9	1.6	21.5
Department of Education	FG	3.5	79.6	20.4	13.8	0	0	6.5	0	0
Department of the Interior	—	169.9	61.1	38.9	9.3	7.0	7.0	9.9	1.3	4.5
Employment and training assistance 3/	CP	25.4	34.2	65.8	0	17.5	10.1	14.9	8.6	14.7
Employment and training assistance	SE	1.2	100.0	0	0	0	0	0	0	0
Young adult conservation corporation-grants to States 3/	PG	143.3	65.5	34.5	11.1	5.2	6.5	9.1	0	2.7
Department of Labor	—	8293.7	88.2	11.8	6.1	1.8	1.0	2.1	.2	.6
Comprehensive employment and training programs, ETA 3/	FG	5529.1	89.7	10.3	6.4	1.5	.4	1.5	.6	.5
Employment and training assistance	SE	1.2	100.0	0	0	0	0	0	0	0
Employment services CETA, ETA	FG	707.2	72.1	27.9	7.5	5.9	5.0	7.8	.6	1.0
Job Corps, ETA 3/	PG	333.4	80.5	19.5	3.4	1.4	6.8	4.2	1.8	1.9
Program administration, ETA	SE	101.2	100.0	0	0	0	0	0	0	0
Research and development projects, ETA 3/	PG	17.5	96.6	3.4	3.2	0	0	.2	0	0
Special programs/activities-disadvantaged: ETA 3/	PG	158.0	97.2	2.8	1.9	.4	.2	.3	0	0
Summer youth employment programs, ETA 3/	FG	667.8	90.1	9.9	5.9	1.5	.5	1.2	0	.7
Work incentives	SE	10.7	100.0	0	0	0	0	0	0	0
Youth community conservation and improvements, ETA 3/	FG	101.6	88.6	11.4	5.1	2.4	.5	2.2	0	1.2
Youth employment and training programs ETA 3/	FG	640.4	89.4	10.6	6.0	1.8	.5	1.5	0	.8
Youth incentive entitlement pilot project: ETA 3/	FG	25.5	99.8	.2	.2	0	0	0	0	0
Action (youth employment support)	PG	1.6	99.8	.2	0	.1	.1	0	0	0
Community Services Administration	PG	7.0	72.9	27.1	0	27.1	0	0	0	0

1/ FmHA - Farmers Home Administration; ETA - Employment and Training Assistance; CETA - Comprehensive Employment and Training Act.

2/ PG - project grants; CP - contractual procurement; FG - formula grants; SE - salaries and expenses.

3/ Estimated distribution.

Source: Reid and Whitehead (1982, p. 45).

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annual expenditures on these programs rose from approximately $3 billion in the late sixties to a peak of around $14 billion in the late seventies, and declined to approximately $4 billion with further cuts programmed for the next several years (Burtless, 1984, p. 18).

As Federal funding through grants to States has declined in recent years, responsibilities of the ES have increased. The ES, for example, administers work tests that determine eligibility for welfare and food stamp programs. Use of the ES to assist the poor in obtaining employment may have compromised the agency's effectiveness with other workers. Neither individuals seeking nor firms offering better paid jobs use the Employment Service. The Congressional Budget Office (July 1982, p. 23) reports, "The Service has acquired a reputation for dealing largely with economically disadvantaged job seekers with low levels of skills." A Department of Labor survey reported that only a fourth of all employers, representing 36 percent of all job vacancies, listed their openings with their public employment service (U.S. Department of Labor, 1976). A much smaller proportion, about 5 percent, of job seekers finds jobs through the ES.

Data on use of the public employment service in rural areas were obtained from family heads in the control and experimental groups of the rural income maintenance experiment in Iowa and North Carolina in 1970 (see Tweeten and Brinkman, 1976, ch. 4). Family heads were asked where they would refer someone looking for work. Two-fifths of the respondents were unable to suggest a place to get help. Twenty-three percent of respondents suggested the public employment service.

The frequency of rural heads who had experienced employment problems was not much less than the frequency of farm heads who had experienced crop problems. A high proportion of farm heads knew where to go for crop-problem advice; a much smaller proportion of rural heads knew where to go for employment advice. Furthermore, because of greater investment by taxpayers in making services of the public extension service available to farmers and for other reasons, 43 percent of those who had problems used it, while only 15 percent of the rural heads who had employment problems used the public employment service. Intensive surveys confirm that many who could potentially benefit from labor services do not register, in part because the ES relies heavily on referrals to local employers who cannot meet needs for employment.

The Department of Labor has an interstate clearing system between State agencies in a central office in Albany, New York. The system, operated by mail, attempts to match employees willing to relocate with employers willing to recruit out-of-area workers (Congressional Budget Office, July 1982, p. 51). The system might operate more efficiently if the linkages between Albany and State offices were by computer. However, an evaluation of the Job Service Matching System (JSMS), a computerized process matching workers to jobs and operating in 24 States, indicated that computerization had done little to improve the effectiveness of the Employment Service (Congressional Budget Office, July 1982, pp. 46, 47).

In short, the public employment service has many shortcomings. Interarea recruitment is minimal. When used at all, services are mostly to provide workers for existing or potential local employers.

The service rarely refers potential workers to the best opportunities available anywhere.

The matching of workers and jobs, if done well, is complex. Computerized nationwide information systems, systematic job counseling beginning at the high school level, and mobile, well-staffed employment teams for rural areas are a few of the potential improvements. These improvements should be monitored for efficiency. If social costs exceed benefits after a reasonable period required to become established, the programs should be changed or abandoned.

Training Programs

CETA training programs in 1980 had 360,000 participants in classroom training at an average cost of $2,700 per trainee, 100,000 in on-the-job training at $2,100 per trainee, and 300,000 in the work experience program at a cost of $2,200 per trainee. The latter program provided subsidized jobs that gave some training and encouraged favorable work habits and attitudes. CETA trainees were mostly the disadvantaged and included a high proportion of enrollees from families receiving public assistance (33 percent) and from minorities (44 percent). Most enrollees were youths, only 15 percent of trainees were over 44 years of age in 1980.

Considerable followup data on CETA trainees were obtained by the Continuous Longitudinal Manpower Survey. The above data, showing small outlays per trainee, reveal that CETA programs could provide little more than an introduction to training. That observation helps to explain results from an evaluation (Congressional Budget Office, July 1982, p. xvii):

(1) Training increased the earnings of females more than of males. The principal reason was not higher wage rates; it was more hours worked. Women were frequently not employed or worked part-time before enrolling in CETA. The program gave enough encouragement, guidance, and skills to be employed more hours. Each of the programs (classroom training, on-the-job training, and work experience) raised earnings from $800-$1,300 per year. This is a modest addition indeed to an income which averaged less than $5,000 per year before training.

(2) Training did not significantly affect average future earnings of male participants, probably because men had previously been employed and because CETA had little impact on wage rates.

(3) Men and women with the least employment experience had the largest earnings gains after training.

The study concluded that, because CETA participants seemed to gain more from job placement than from training per se, more emphasis should be on job placement services and less on formal training. Studies suggest that intensive group (for example, job club) search produces high placement rates, and the approach needs to be explored (see Congressional Budget Office, July 1982, p. 44).

Under the voucher training system, eligible recipients were provided a voucher paying some or all of their training costs. The training institution and field of study were chosen by the client rather than by counselors or specialists, the latter being the tradition for publicly supported training programs. A review of results of several scientifically designed experiments for the disadvantaged provided no evidence that clients themselves made decisions more or less superior to those made by counselors or job specialists (Sharp and others, 1982, p. 95). Occupations selected by voucher holders were similar to those picked for them by "experts." Recipients made extensive use of 4 year and community colleges, particularly of vocational-technical programs such as secretarial or data processing in community colleges.

-- The economic payoff from training programs tended to be modest. A Seattle-Denver voucher experiment found that small earnings differences found favored the control group that did not receive training voucher subsidies.

-- No more than a third and probably considerably fewer of those most in need of further education and skill enhancement will seek training.

-- The variety and quality of programs and institutions providing CETA training under the voucher system are uneven, with the most inadequate resources in smaller communities and rural areas.

The study (Sharp and others, 1982, p. 101) concluded:

> All indicators suggest that if CETA training is viewed as a means for promoting employability and economic independence for the most severely disadvantaged members of society, vouchering training would be an inappropriate mechanism for the pursuit of this goal.

Previous studies and data systems provide few clues regarding how CETA or its successor, the Job Training Partnership Act, has influenced the rural labor force of over 30 million. Despite cutbacks in Federal training programs for all sectors, the issue is of continuing concern.

State and local vocational-technical programs have grown in recent decades and are far more important than Federal programs in providing training. The State programs serve broad classes of people and tend to have higher completion and placement rates than Federal training programs for the disadvantaged. Many of the programs are of sufficient duration and quality to add much to income.

On the other hand, increasing evidence points to frequent cases of low-quality vocational-technical training or training for jobs that do not exist. A related problem is placement efforts focused narrowly on the local job market without sufficient attention to regional and national markets and to the projected supply-demand balance for various skills. Many local State vocational-technical schools need to improve outlook, placement rates, and training quality. These issues including the private and social payoff from vocation-technical schooling as it relates to rural areas is a priority item for research (see Tweeten and Brinkman, 1976, ch. 4, for earlier studies).

Off-farm wages of farmers increase with additional schooling according to a number of estimates. However, vocational training frequently has had a negative affect on off-farm wage rates (see Huffman, 1985). One explanation is that vocational training has little affect on improving earnings. An alternative and perhaps a more plausible explanation is that individuals who choose vocational training are less able and earn a lower wage than others, other things equal. Vocational training does increase the probability of farmers' participating in off-farm work.

Negative Income Tax and Manpower

Various welfare reform proposals have had important implications for rural manpower. Experiments have shed light on two major contenders for reform--a negative income tax and a wage/earnings supplement.

The Rural Income Maintenance Experiment conducted from 1970 to 1972 in Iowa and North Carolina estimated that a negative income tax with a 45-percent tax rate and income guarantee at 80 percent of the poverty threshold would reduce hours worked by families as a whole by 13 percent (Bawden and others, 1976, p. x). Responses differed greatly among family members. Husbands reduced hours worked very little while wives reduced hours worked for wages by 27 percent and dependents by 46 percent. Labor supplied by farmers was not reduced by the negative income tax.

The Seattle-Denver negative income tax experiment, initiated in the early seventies and considered to be the best run of several such efforts, included 4,800 families. Prime age males in the 5-year negative income tax program reduced annual hours of work by 9-10 percent, their spouses reduced work by 17-20 percent, and women heading single-parent families reduced annual hours by as much as 32 percent (Burtless and Haveman, 1984, p. 108).

These reductions for urban families in the Denver-Seattle study were greater than for rural families in the Iowa-North Carolina study and much larger than for farm families. In the words of Burtless and Haveman (1984, p. 108), these reductions

> ...are large enough to cause alarm among conservatives already opposed to a NIT [negative income tax] and even among centrists with no strong opinions about the desirability of a NIT.

Subsidized Employment

In view of the inability of Federal job search and training programs to add much to income and in view of work disincentives in negative income tax programs, it is well to examine a major alternative to raise income of the disadvantaged, that of subsidized employment.

Public service employment programs for the disadvantaged have been criticized for providing only make-work, dead-end jobs. Such employment produces little of value, it is said, because conventional public and private workers, firms, and agencies do not want competition. Public employment programs cluster persons with job-finding and job-holding deficiencies into groups where they often reinforce each other's inadequacies rather than learn by interacting with competent, experienced workers.

The Employment Opportunity Pilot Project (EOPP) was established by the Department of Labor in the late seventies. It provided comprehensive job services up to and including public employment if other measures failed to gain employment for participants. To be eligible for subsidized employment or training, an individual had to participate in the job search phase without obtaining employment, had to be the family's primary earner, and had to either receive Aid to Families with Dependent Children (AFDC) or have income low enough to qualify for AFDC.

Of the 120,000 eligible for all EOPP services, including subsidized employment and training, only 21,000 or 18 percent enrolled and only 3 percent obtained public service employment jobs (Burtless and Haveman, 1984, p. 122). The authors concluded (pp. 122, 123) that:

> ...a guaranteed public jobs program aimed at the welfare-eligible poor would be considerably less expensive than anticipated [but]...the program would be much less successful than expected in reducing welfare dependence since only a small percentage of AFDC recipients would apparently be forced to participate in such a program.

Public service employment has a mixed but generally unfavorable record of success. Public-private partnership arrangements have worked better. Given the current budget stringency, it is well to reexamine alternatives to reduce public cost and raise the value of output through subsidized private employment for the disadvantaged. Many countries including the United States have used wage-earnings supplements. An early U.S. Federal effort was Job Opportunities in the Business Sector (JOBS), a program begun in 1968. It was cost-effective, utilizing public funds to induce private firms to hire and train the disadvantaged (Tweeten and Brinkman, 1976, p. 115). Shortcomings of the program included (1) inadequate Federal funding and perhaps related failure to reach its employment goals, and (2) little use in rural areas, in part because small firms, especially prevalent in such areas, found the programs burdensome given limited personnel available to train workers.

The first sizable earnings subsidy scheme was the Earned Income Tax Credit introduced in 1974. The maximum subsidy for a family head with children was only $400 when earnings were $4,000 per year. Congress extended the program in 1978 and increased the maximum credit to $500 with earnings of $5,000. A negative earnings tax imposed at a 10 percent rate applied to the supplement above annual earnings of $6,000, thereby eliminated the subsidy at earnings of $11,000.

The Earned Income Tax Credit was paid to employees. If their employment decision was unresponsive to wage or earnings, the supplement would have little impact on labor supplied. If workers desire to be employed, but employers will not hire because of minimum wage laws or other impediments that keep wages above the value of workers' output, then a more effective approach might be to reduce labor cost to employers--a proposal enacted in the late seventies. Firms which increased employment sufficiently could subtract 50 percent of the first $4,200 of wage income paid to an additional worker from its tax liability, up to $100,000 of tax credit. An extension of the program in modified form for 2 years in 1978 limited the subsidy to newly hired target group members including various categories of welfare recipients.

A number of evaluations have been made of wage/earnings supplement programs. Drawing on work by Bishop and Lerman, Haveman, and Christainsen (1978, p. 56) estimated that Federal budgetary cost per job created was less than a fourth the cost of the most efficiently run direct public employment program. However, the net jobs created by a wage supplement program were estimated to be only 20-50 percent of the gross jobs created. The tax credit earnings supplement was estimated to have reduced inflation and increased employment, other things equal.

A Dayton, Ohio, experiment indicated that subsidizing wages can be counterproductive. Disadvantaged workers were divided at random among three treatments:

(1) The first treatment group was provided a tax credit voucher under the Work Incentive (WIN) tax credit program enacted in 1971 and Targeted Jobs Tax Credit (TJTC) enacted in 1978.

(2) The second treatment group was provided a cash voucher which could be redeemed by employers for cash equal to 50 percent of wages paid during the first year of employment up to a $3,000 subsidy, and 25 percent of wages paid during the second year up to a $1,500 subsidy. (This was the same value of subsidy as in (1), except that in (1) employers had to have tax liabilities of that amount to achieve full value.)

(3) The third group was a control with no subsidies.

Results were striking. Employers were reluctant to hire job seekers provided wage subsidies (Burtless, 1984, pp. 12-17). Compared with otherwise identical job seekers not given wage subsidy vouchers, unemployed workers provided with vouchers were significantly less likely to be hired. The voucher probably had a stigmatizing effect, providing employers with a screening device to discriminate against economically disadvantaged workers.

Thirteen percent of each voucher group (the tax voucher group and the direct cash voucher group) were placed in jobs but 20 percent of the control group were placed in jobs. Either because employees did not offer or because employers did not request, three-fourths of the employers eligible for voucher benefits did not use them.

Other studies, however, indicate that subsidies increase chances of hiring disadvantaged youth. The Employment and Training Administration in a project in Detroit and Baltimore found that employer participation increased with the size of the subsidy (U.S. Department of Labor, 1982, p. 115). Although responses were generally low because of recession, about 18 percent of the firms eligible for 100-percent wage subsidies hired a low-income youth, 10 percent of firms with 75-percent subsidies hired low-income youth, and only 5 percent of firms with 50-percent subsidies hired low-income youth (U.S. Department of Labor, 1982, p. 115).

The above studies point to serious limitations of wage-earnings subsidies. However, several shortcomings of past experiments limit inferences that can be drawn: (1) the subsidies were earning or training subsidies, not wage rate subsidies; and (2) they were temporary, small, and given to identified disadvantaged workers. A large program available to all would cost more than the narrowly circumscribed programs discussed above but would have less stigma, could target lower-income workers, and would help some industries, such as textiles, prominent in rural areas, compete with low-cost imports. The latter is of concern when the dollar is strong in international exchange.

One proposal is for the Federal Government to provide workers with a wage supplement equal to (for example) half of the difference between a target wage (say $6.00 per hour) and the wage paid by an employer. The program could be tailored to circumstances. For example, only high school graduates or those certified as incapable of completing high school might be eligible. High school students might be eligible for subsidies in the summer months.

The program would interfere less with economic efficiency than would other major welfare reform schemes. It would especially benefit the working poor prominent in rural areas. The wage/earnings supplement would automatically target marginal workers and hence would not rely on unemployment or other flawed allocators. The program could simultaneously raise the income of the disadvantaged while making their limited skills attractive to profit-minded employers. It is one of the few welfare-reform and manpower programs that offers promise to at once increase employment and output, reduce underemployment, and help hold prices down while targeting benefits to those with low income. It would help keep the United States competitive in industries, such as textiles, important to thousands of rural workers but which have difficulty competing with low-wage foreign labor.

Comprehensive Programs for the Hard-Core Disadvantaged

The Job Corps provides a campus-like program of comprehensive training, counseling, and job search assistance for the hard-core disadvantaged. Costs averaged $14,000 per trainee in 1984. Although expensive, the program has had positive results. Some estimates indicate the program returned $1 for each $1 invested ("Antipoverty Policy: Past and Future," Focus, Summer 1985, p. 15). If these benefits and costs were adjusted for the utility of income for those who pay the costs and receive the benefits, the program would be rated as one of the more successful of a generally disappointing array of Federal manpower programs.

The National Supported Work Demonstration project took place from 1975 to 1978 with 10,043 persons employed as participants in supported work programs. Groups were extremely disadvantaged (Manpower Research Corporation, 1980, p. 23ff). About 38 percent were ex-offenders, 21 percent extended AFDC recipients, 23 percent disadvantaged youths, and 12 percent ex-addicts. To be eligible for the AFDC group, persons had to be on AFDC for 30 of the last 36 months, be currently unemployed, and have limited recent work experience. The ex-offender group had to be age 18 or older and incarcerated within the last 6 months as the result of a conviction. Among the ex-offender group, a third reported they were regular users of heroin.

Close supervision was provided and contractors were urged to utilize enrollees to produce goods and services for the market. However, only 16 percent of the funds for the project came from sale of goods and services; the remainder came from donor agencies.

Social benefit-cost ratios from the project were judged to be greater than one for the AFDC and ex-addict target groups but less than one for the youth and ex-offender target groups. Results indicated that the AFDC group program was particularly effective for older women (those between 36 and 44 years old at the time of enrollment) and for women who had never worked before or had been on welfare longest. These individuals were motivated and had considerable scope to increase working time.

The most important lesson from the study was that highly disadvantaged workers can be employed. The controls had employment rates of 40-60 percent, the experimentals up to 10 percentage points higher. Still, even this intensive program left many unemployed.

Helping Workers Displaced by Imports

The Trade Adjustment Assistance (TAA) program initiated in 1962 offered comprehensive assistance to workers displaced by import competition. The concept behind TAA is especially favored by economists who conclude that the United States as a Nation gains from freer trade, but persons who lose deserve compensation to make free trade initiatives politically attractive. Some have argued that it is inappropriate to incur billions of dollars each year in national losses due to international trade restrictions while allocating only $200 million to Title 3 of the Job Training Partnership Act, the Nation's chief manpower policy response in recent years to worker displacement.

The TAA program is an excellent example of a well-intentioned effort gone awry. The TAA program offered cash benefits (Trade Readjustment Allowances), training and related services through the Employment Service, and job-search and relocation cash allowances. TAA benefits were made available to anyone certified by the Secretary of Labor as having incurred damages as a result of foreign imports. TAA outlays grew from $70 million to $1.7 billion between 1976 and 1980. Unfortunately, the program became one of poorly targeted income maintenance rather than adjustment. Of those who received TAA payments in fiscal years 1976-80, about 13 percent received counseling, less than 3 percent were referred to training, and about the same share were placed on jobs (see Congressional Budget Office, July 1982, p. 28). Between 40 and 75 percent of workers who applied for TAA benefits were already reemployed at the time they applied for retroactive benefits. Surveys indicated that from 67 to 72 percent of workers who received TAA benefits in 1976 returned to work with their former employer.

Relocation assistance under the TAA program had limited success. Although relocation allowances and a portion of reasonable moving expenses were paid, fewer than 1 percent of workers who applied for employment services took advantage of those provisions.

Other relocation projects have had greater success. A Department of Labor job-search and relocation project conducted between 1976 and 1980 used local employment offices to provide a combination of job information, job search grants, and financial assistance to cover moving expenses (Congressional Budget Office, July 1982, p. 50). Relocation assistance was provided to almost 2,000 individuals through a project in 32 local Employment Service offices in eight southeastern States (U.S. Department of Labor, 1982, pp. 112-114).

A comparison of re-employment success of those who were unemployed and received assistance with those who did not receive assistance found that:

- Project participants became re-employed more quickly than the control group.

- About 55 percent of those who were relocated were employed, mostly full time, in the new area 12 months after relocation.

- The average cost to the Government for relocation was $1,350 for administration, job search, and relocation grants.

- Project costs from a societal perspective were recovered in just over 15 weeks.

Lovell (1984, p. 27) recommends that a displaced worker be defined as a laid-off employee with 4 years of covered employment by the State unemployment system and who is certified by his or her former employer to be unlikely to return to work for that company within a 6 month period. Workers enrolling in the program would participate in a 40-hour-a-week schedule of job searching and training. Initial emphasis would be on information and counseling. If, after several months of counseling and job search assistance, the participant found no job, a voucher would be provided to cover the full cost of relatively short retraining efforts and a percentage of the cost of any longer-term training programs. Workers would be provided with information, not only on local job opportunities, but also on statewide, regionwide, and nationwide opportunities. One option would be to provide low-cost loans or loan guarantees when jobs in other locations are offered and accepted. Of interest is that such proposals for displaced workers could not include the self-employed and those not covered by unemployment insurance, categories prominent in rural areas.

U.S Department of Labor (DOL) Programs for Farmers

Hired farmworkers and farm operators are a small part of rural manpower but have been the subject of some of the most controversial issues and labor programs.

Martin (1985, p. 31) notes four major farm labor responsibilities carried out by DOL:

(1) To match workers and jobs and provide other services through the Employment Service offices. The most intensive program is for migrant and seasonal workers in fruit and vegetable harvesting.

(2) To certify that farmers wishing to import temporary workers under the H-2 program have satisfied housing and recruitment requirements.

(3) To assist migrant and seasonal farmworkers who wish to obtain employment and training skills to advance in farm or nonfarm jobs.

(4) To enforce Federal labor laws applicable to agriculture, including fair labor standards laws (minimum wage), safety and health laws, and pension laws.

These and related topics are discussed in detail by Coltrane (1984) and by Martin (1985). They are not treated here except to note some unresolved issues (Martin, 1985, p. 31):

> -What is the appropriate Federal role in farmworker employment and training programs?
>
> -How can the Employment Service best match farmworkers and jobs?
>
> -How can DOL establish a reliable wage base and certification criteria to determine whether farmers have truly attempted to recruit American farmworkers?
>
> -What are optimal enforcement strategies for wage, housing, labor contractors, and health and safety standards?

Summary and Conclusions

National Manpower Policies

The Job Training Partnership Act (JTPA) of 1982 signaled a radical new direction in national manpower policy. Notable features of the Act include:

— Block grants to States to perform job training and other manpower programs formerly performed or supervised by the Federal Government.

— Greater emphasis on the private sector acting alone or in concert with public agencies to provide manpower services.

Gone are the large social experiments that represented the highwater mark of social science emulating the methods of experimental statistics with treatments and controls. Gone are the grand initiatives designed to bring equality of economic outcomes through public provision of compensatory human resource inputs. Controlled social experiments demonstrated that human resource economic research could be conducted on a large scale and be scientifically sound and produce significant results. The experiments showed that net benefits of many manpower programs are only marginal at best. But information relating to rural people and areas is frequently lacking.

Perhaps the public expected too much from manpower programs. Labor policies rested on the myth that large numbers of the poor could be salvaged by job training at reasonable cost. In the process, public employment agencies lost much employer support. Employers simply went elsewhere for competent workers, and public employment service efficiency and placements fell. Labor services must be retained for disadvantaged groups, but such services should not replace services for other groups or neither of the groups will be well served. Some human resource programs did not work because they were too small and poorly funded. Others failed because problems of the disadvantaged proved intractable. The failure of home and community to instill competence in the hardcore disadvantaged cannot be compensated at a low cost by labor policies alone. Thus it is often necessary to begin manpower policy with preschool programs such as Head Start.

The new manpower policy has positive and negative aspects. It increases accountability by moving decisions closer to those who provide and receive labor force services. It emphasizes State and local training services, services with historically higher rates of placement and return on investment than Federal training programs.

Negative aspects are also apparent. State and local governments frequently ignore manpower needs of the disadvantaged. Such governments have not been known for rigorous evaluation of efficiency or equity dimensions of their programs. Such governments also have not been noted for careful coordination of programs to match vocational-technical training with the national and regional labor markets.

The best of the manpower development programs for the disadvantaged in the Jobs Corps and AFDC have conventional benefit-cost ratios of only 1.0 or somewhat higher. AFDC is mainly for women who have been out of the labor force for long periods. Although transfer payments would be about as effective in raising well-being, the American public may more willingly invest in human resource development programs. Past Federal programs mostly just increased hours of work. Greater reliance on State vocational-technical programs offers the potential for longer, indepth training necessary to raise earnings per hour. Of concern is whether programs will be evaluated for equity, efficiency, and impacts by sector, age, and other dimensions. Here, it is well to recall the conceptual framework outlined earlier in this paper: manpower programs for the disadvantaged yielding a conventional benefit-cost ratio of only 1.0 can have a significantly greater social payoff than programs for more wealthy groups yielding higher benefit-cost ratios.

Rural Manpower

Now turning to rural areas, the situation as reported by Ray Marshall (1974, p. 119) in the seventies has changed little:

> By whatever standard we judge manpower experiences, the evidence seems to support the conclusion that rural areas have been shortchanged in manpower efforts. An issue paper prepared by the Labor Department concluded that rural areas, with 22 percent of

> the population in 1969, received about 6.9 percent of labor and manpower efforts.

Modest progress occurred when Ray Marshall subsequently served as Secretary of Labor in the Carter Administration. Although JTPA seems to offer little hope for improvement, it is hazardous to be critical of manpower efforts without more hard data and analysis showing the payoff from such services to rural people. Such data are sparse indeed.

Data and Analysis Needs

Three general areas of data and analysis needs for rural areas which the Agriculture and Rural Economics Division can help to fill are discussed below:

(1) Data measuring poverty, underemployment, and other dimensions of labor market performance and needs for public manpower policies are of high priority. As noted in the text, such data are especially deficient for rural areas. Some excellent descriptive statistics are available regarding the hired farm working force (see Pollack and Jackson, 1983) and farm operations (U.S. Department of Agriculture, January 1985). But relatively little is known about poverty and underemployment by economic classes of farms and even less is known of the characteristics of the nearly 30 million nonmetropolitan labor force. Information is much more complete on the 2.4 million hired farm work force and the 100,000 migrant farmworkers than on the more than 25 million nonfarm rural workers.

(2) Analysis of manpower program payoffs. The considerable research reported herein says something regarding what does and does not work to reduce poverty and underemployment. On the one hand, the long list of past work force programs depicts the image of a public labor effort that is alert, imaginative, innovative, and bold. On the other hand, the image is a labor policy that is barren of proved, solid, comprehensive delivery systems integrated with other socioeconomic development efforts.

For the nonsalvable poor, such as disabled and elderly, there is little alternative to income transfers. Transfers are more cost-effective than manpower programs in using limited public funds to raise income because the latter programs devote considerable resources to training costs, which produce little or no earnings for the target group.

For the salvable poor and the unemployed nonpoor, a negative income tax has large disincentive effects. Public employment programs are expensive to taxpayers, and large programs are difficult to direct at producing valuable output because of political objections of the conventionally employed. Federal efforts have been disappointing to bring jobs to people through the industrialization incentives.

This narrows the list of successful manpower programs to some training, relocation assistance, and placement efforts. Monitoring performance of local-State vocational-technical training programs will be central because of the large role played by these institutions in national manpower policy. The task of matching supplies of trained workers to demands for skills requires outlook information responsive to a labor market that is national in scope. Saks (1984, p. 49) put it this way:

> In a couple of years, Congress will want to know whether the Jobs Training Partnership Act is nothing but a transfer of funds to the states. And the states will want to know what programs are effective for which groups in which circumstances.

Some manpower programs are promising. After more than a decade of experience, an effective school-to-work program (called Jobs for America's Graduates) seems in sight. First tested in Delaware in 1979 and 1980, the program now operates in nearly 100 high schools in eight States to provide counseling and job search skills to disadvantaged youth. Whether this or similar programs can be initiated, maintained, or evaluated in the future is of particular concern.

With funding cuts, the Department of Labor cannot be expected to provide labor market performance data relating either to equity or efficiency in rural areas. The Agriculture and Rural Economics Division and universities can help. Efforts to work with agencies to collect relevant statistics and analyze results will be crucial if rural areas and people are to be served.

(3) Basic parameters such as supply and demand for labor. Predicting impacts of changes in public manpower policies requires viable estimates of parameters such as labor supply and demand elasticities. Agricultural workers are excluded from much social legislation such as the National Labor Relations Act. If wages of farm and other workers were changed by higher minimum wage rates or by greater coverage, by labor union contracts, or by higher payroll deductions for social security, disability insurance, and other social programs, what would be the impact on employment, payrolls, and output?

The economic payoff from both human resource and industrial development programs may be enhanced with balanced growth providing jobs and skills in depressed rural areas. Basic parameters relating population characteristics to public programs and, in turn, public programs to socioeconomic payoffs are required to model and evaluate alternative rural development strategies. What is the least-cost mix of public manpower, welfare, and job development policies to alleviate poverty and underemployment in rural areas? Better data and analysis are needed not only to determine labor market successes and failures but also to gauge how far Government programs can go to correct market future with positive social benefits.

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INDUSTRIAL RESTRUCTURING IN METROPOLITAN AND NONMETROPOLITAN LABOR MARKETS: IMPLICATIONS FOR EQUITY AND EFFICIENCY

Marta Tienda 1/, 2/

Technology has revolutionized the nature and organization of work, but differentially so over time, within economic sectors, and across labor markets. The most salient feature of change in U.S. employment over the past 40 years has been a shift toward services, a process largely spurred by the decline of agricultural employment. For example, owing to the dramatic increase in output and productivity during the post-World War II period (Cochrane, 1979; USDA, 1981), agricultural employment declined 80 percent in 40 years, falling from 21.3 percent of total employment in 1940 to approximately 4 percent by 1980 (Browning and Singelmann, 1978). 3/ More than any other single change in employment, the sharp drop in the number of farmers and farm laborers since 1940 illustrates the profound ramifications of technological change on the demand for workers in rural areas.

Accompanying the sweeping changes in the industrial composition of production and employment was a concomitant transformation of the occupational structure. Primarily, the latter involved changes in the technical division of labor as a result of the increasing specialization, and in some instances, from the routinization and deskilling of occupational tasks. Consequently, during the past two to three decades we have witnessed the proliferation of a vast array of entirely new occupational positions, particularly in the technical and semiprofessional category, but also including semi-skilled jobs (Singelmann and Tienda, 1985; Singelmann and Browning, 1980). Again, the agricultural industry provides a good illustration of how technological change resulted in more complex division of labor within the industry. That is, due to the requirements of a complex agribusiness establishment, the agricultural industry currently includes many professional, technical, and managerial workers far more than was previously the case.

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3/ Cochrane (1979: table 7.2) showed that agricultural output doubled during this period while inputs increased roughly 3 percent. However, this impressive increase in agricultural productivity was facilitated by an equally remarkable substitution of machines and chemicals for laborers. He reported a 412 percent decline in labor inputs at the same time that mechanical inputs rose 276 percent and chemical inputs skyrocked by almost 1,200 percent (see tables 7.2 and 8.3)

The sociological significance of the structural transformation of production and employment resides in what these macrosocial processes portend for future patterns of social mobility and social stratification at both national and subnational levels, and among various population subgroups (for example, age, gender, nativity, and racial groups). Although several writers speculated about the general significance of the structural transformation of employment for society as a whole, and the labor force in particular, much of this discussion was cast in speculative and retrospective terms (Bell, 1973; Browning and Singelmann, 1975, ch. IX; Fuchs, 1968). With a few recent exceptions (Tienda and Ortiz, 1985; Nilsen, 1978 and 1984), aggregate studies of the process of occupational change have failed to address empirically the equity implications of these master social trends, particularly as they relate to economic well-being.

Although relatively neglected by past research, the concern with socioeconomic inequities across labor markets is very important for comparisons between metro and nonmetro workers because differing pay scales and opportunity structures historically have rendered monetary and prestige advantages to the former. Unfortunately, there have been relatively few comparisons of the changing production structures in metro and nonmetro areas, and even fewer have examined directly the social and economic implications of these trends for various population subgroups. 4/ With the exception of recent work by Nilsen (1978 and 1984), there are no studies that document empirically whether the industrial restructuring processes have unfolded uniformly in metro and nonmetro areas, and along what demographic dimensions social and economic equity was enhanced.

Accordingly, my first objective is to outline and compare the major dimensions of industrial and occupational restructuring in metro and nonmetro areas during the past two decades. Through this comparison I seek to identify differences that maintain or exacerbate residential and gender inequities over time. To accomplish this, and my second objective of exploring the equity implications of the industrial restructuring process, I organized the rest of the paper into four parts.

The first section provides a broad theoretical and historical discussion of the significance of industrial restructuring processes for equity issues both between metro and nonmetro areas and between men and women. Although some of the issues considered have been raised before in connection with total U.S. employment trends (Browning and Singelmann, 1978; Singelmann and Tienda, 1985), their implications for metro and nonmetro areas were not examined systematically. This is unfortunate because the decline of agricultural employment has been a singularly important force in the growth and diversification of the service economy, yet the consequences of a shrinking farm sector for industrial and occupational diversification obviously were not uniform in metro and nonmetro areas. That is, from the perspective of the territorial division of labor, metro and nonmetro labor markets have engaged in an unequal exchange of resources and labor over time, with the net flows

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4/ For an exception to and overview of these issues in the literature on human ecology, see Frisbie and Poston, 1978.

usually favoring urban and metro sectors over rural and nonmetro sectors. 5/

The second section, which begins the empirical analysis, documents the process of industrial and occupational transformation in metropolitan and nonmetropolitan areas between 1960 and 1980, outlining differences over time and between men and women. The first part of this presentation involves a descriptive overview of changes in selected correlates of employment in metro and nonmetro areas. Subsequently, I decompose the process of occupational change into three inter-decade components: (1) an industry shift; (2) an occupation composition shift; and (3) a joint industry by occupation shift. In keeping with sociological interest on the occupational structure, 6/ my primary concern is to determine how the rise and decline of industries, coupled with their changing internal division of labor, resulted in net occupational upgrading or degradation over time. 7/

The third section explores the equity implications of industrial restructuring change based on education and earnings differentials between employed men and women who reside in metro and nonmetro labor markets. This section also includes a more indepth examination of the agricultural industry, which is singularly important for understanding the operation of rural labor markets. Results show persisting earnings inequities between men and women, despite the convergence of their human capital credentials and the increased representation of women within the industry.

The fourth section elaborates the equity implications of the empirical sections through a methodological exercise that proposes a strategy to link structural change to earnings differentiation by gender and residence category. Although analogous to supply and demand analysis conducted by economists, the proposed method is technically quite different. The proposed multi-level approach (see Tienda and Ortiz, 1985) promises to illustrate how the mechanisms of structural transformation result in different opportunities and rewards for various labor segments within and between metro and nonmetro markets. Pursuit and extension of this line of inquiry asks: has the prevalence of high-status jobs in nonmetro areas increased, and if so, has this resulted in greater or lesser equity between men and women working in metro as compared to nonmetro areas?

5/ This point is documented extensively by the vast literature on internal migration which shows that rural to urban (or nonmetro to metro) migrants are selective on several productivity-related characteristics, including age and education.

6/ This concern differs somewhat from that of economists, who largely emphasize industrial over occupational changes. There are, of course, exceptions, and labor economists seem to be paying greater attention to occupations as dimensions of labor market structure in recent years.

7/ I also examine the extent of intraindustry occupational differentiation as a way of gauging territorial inequities in economic development between metro and nonmetro areas, following the work of Browning and Gibbs (1971).

In the concluding section, we discuss problems of our proposed strategy, such as that posed by noncomparable data categories over time, and suggest a research agenda to undertake the empirical analysis proposed in the fourth section.

Equity Implications of Occupational Change, Theoretical Considerations

Sociologists concerned with the study of social mobility and stratification have commented extensively on the significance of occupational change for socioeconomic differentiation (Hauser and Featherman, 1977; Featherman and Hauser, 1978). Yet, with surprisingly few exceptions, researchers interested in occupational roles have not examined directly the consequences of changing industrial structures for socioeconomic differentiation among various social and demographic groups (for exceptions see Featherman and Hauser, 1978, ch. 9; Tienda and Ortiz, 1985). Information about residential and gender changes in employment fluctuation may be useful to policy analysts insofar as they pinpoint the demand for workers of varying skill levels and thereby aid in predicting labor displacement among specific industries as changing production technologies render previously existing skills obsolete.

In a succession of articles, Browning, Singelmann, and their associates (Browning and Singelmann, 1975 and 1978; Singelmann and Browning, 1980; Singelmann and Tienda, 1985) documented in broad descriptive terms the implications of changes in the structure of production for the industrial and occupational composition of employment over the past 50 years. They showed that gradual increases in service employment accompanied the relative decline of agricultural employment and that the service sector itself became more differentiated over time. These two master trends, declining agricultural employment and expanding service employment, generally are associated with the process of economic development, although careful cross-national study has revealed that the pattern of change in the industry structure can vary considerably across time and place (Singelmann, 1978; Singelmann and Tienda, 1979).

Singelmann and Browning's (1980) analyses of the process of occupational change between 1960 and 1970 indicated that the pace of industrial transformation from a goods to a service economy was slowing, and they speculated that it was nearing its completion. This decrease in the pace of the industrial transformation partly resulted from a slower employment decline in extractive industries (agriculture and mining), which had largely propelled the structural transformation of employment during the fifties and sixties. By 1970, employment in the agricultural industry had fallen to a very low level (roughly 4 percent of total employment). Thus Browning and Singelmann (1978) speculated that further declines, if they were forthcoming at all, would be quite modest. Hence, they argued that further reductions probably would produce small effects on the occupational structure.

Because industrial shifts were largely responsible for occupational upgrading through 1970, (as high growth industries employed relatively larger shares of professional, semiprofessional, and managerial workers compared to declining industries), Singelmann and Browning

(1980) feared that the slowdown in the process of industrial change might also dampen the process of occupational upgrading. Hence, the prime social and economic significance of industrial restructuring for the socioeconomic well-being of the work force is that stagnation in the expansion and diversification of the service economy could decelerate the overall pace of occupational change and stop the growth of high-status occupations in particular.

However, a more recent analysis by Singelmann and Tienda (1985), which extended from 1970 to 1980 the early work of Browning and Singelmann (1975; Singelmann and Browning, 1980), showed that this was not necessarily the case. Although their analyses confirmed a decrease in the amount of occupational change resulting from the industrial transformation of employment during the seventies as compared with the sixties, they also showed that the rate of occupational change was not as slow as earlier expected. This resulted because the occupational recomposition of industries reflecting changes in the technical division of labor within industries intensified during the latter seventies.

The net effect of intraindustry occupational recomposition was to increase the demand for more highly skilled labor through further occupational upgrading. Specifically, Singelmann and Tienda (1985) showed that the highest status occupations (professional, technical, and managerial workers) continued to expand during the seventies, although at a slower rate than observed in prior years. What is noteworthy about the mechanisms transforming the employment structure over time is that industrial and occupational shifts did not always increase the rate of growth of high-status occupations. Prior to 1970, the changing occupational mix within industries in some instances had been detrimental to the process of occupational upgrading in that the changing intraindustry division of labor offset the relative increase of high-status occupations generated by the industrial transformation of employment.

While quite informative about the dynamics of occupational change, the existing work, which considers national employment changes among industries and occupations, not only ignores how these changes were linked to economic differentiation among workers but also conceals important intranational variation in employment opportunities. Certainly the pattern and rate of decline in agricultural employment was not uniform across States and between metro and nonmetro labor markets. Also, and as the recent examples of deindustrialization starkly demonstrate, employment shifts in manufacturing industries have also varied over time and space.

To the extent that variation in the pace and patterns of industrial restructuring between metro and nonmetro labor markets resulted in uneven growth of high-status and well-paying jobs, it could maintain and possibly even exacerbate the persisting socioeconomic inequities between metro and nonmetro workers. This is an empirical question that we address by analyzing differences between metro and nonmetro areas in the relative importance of industrial shifts and intraindustry occupational recomposition in producing upgrading. That the expansion of services was not restricted to metropolitan labor markets provides fertile material for scrutinizing whether and how the process of occupational change has varied among subnational areas specializing in different commodities and services.

The basic justification for comparing industrial restructuring between metro and nonmetro labor markets reflects my conviction that intertemporal changes in technology, population distribution, and the penetration of manufacturing enterprises in sparsely settled areas will continue altering nonmetro production and employment structures for some time after the national trends appear to stabilize. [8] Given the diversity of demographic and economic forces affecting the national landscape over the past two decades, a comparison of employment changes between metro and nonmetro labor markets not only will indicate whether the same mechanisms have operated and whether the pace of change has been uniform over time, but it will also help in identifying how the structure of demand for labor of varying skill levels has evolved. As such, this approach toward labor market differentiation will elucidate the equity implications of the industrial restructuring processes in metro and nonmetro areas.

The Process of Occupational Change in Metro and Nonmetro Areas, 1960-80

To introduce the discussion of labor market inequities, table 1 presents a selected set of socioeconomic indicators between 1960 and 1970 for the labor force according to metro and nonmetro residence. [9]

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[8] Our empirical analyses are based on a metro/nonmetro designation not for statistical convenience, but because the criterion of "functional integration of economic activities" used to define metropolitan areas also has served as the primary basis for operationally defining urban and rural labor markets. Unfortunately, the criterion of functional integration does not allow for an easy differentiation of nonmetro labor markets. Rather, the category, "State nonmetro area" has been treated as an undifferentiated economic area by many researchers interested in portraying variation across labor markets. Since my analyses focus only on metro-nonmetro comparisons, the latter concern is less serious than if the unit of analysis were the labor market. However imperfect is the Standard Metropolitan Statistical Area as an operational definition of an urban labor market, the operational definition of rural labor markets is even less well developed.

[9] The empirical analyses for the tabulations in this and the following section are from the Public Use Micro-data Samples of the 1960, 1970 and 1980 Censuses. The main strengths of these data are their national representativeness and general suitability for time-trend comparisons. Three noteworthy exceptions that affect the tabulations presented, particularly the 1970-80 changes, are the liberalization of the definition of metro areas in 1980; the extensive changes in the occupational classification scheme in 1980; and the substantial amount of missing data (owing to suppression) for residence in 1970. We suspect (and our preliminary analyses confirm) that cases with suppressed residence information were disproportionately from nonmetro areas. An additional problem concerns the difficulties of adequately measuring the hired farm work force, particularly those whose involvement is restricted to seasonal

...(Continued on next page.)

Table 1—Selected social indicators of the U.S. labor force by metro/nonmetro residence and gender, 1960-80 1/

Characteristics	Unit	1960		1970		1980	
		Metro	Nonmetro	Metro	Nonmetro	Metro	Nonmetro
Men:							
Labor force participation rate, ages 16+	Percent	80.6	75.1	78.3	72.9	76.4	71.3
Mean education, ages 25+	Years	10.7	9.7	11.6	10.8	12.9	11.9
Percent of employed who worked full-time year-round	Percent	68.6	63.6	67.8	68.7	68.4	67.5
Annual earnings:							
All workers	Dollars	5,398	4,159	8,747	6,856	16,748	13,865
Full-time year round	Dollars	6,186	4,985	10,041	7,898	19,746	16,222
Women:							
Labor force participation rate, ages 16+	Percent	37.7	31.6	42.8	38	51.5	45.1
Mean education, ages 25+	Years	10.8	10.4	11.6	11.2	12.6	12.1
Percent of employed who worked full-time year-round	Percent	45	38.4	43	41.8	47.2	43.3
Annual Earnings:							
All workers	Dollars	2,678	2,087	4,211	3,402	8,472	6,846
Full-time year-round	Dollars	3,495	2,848	5,476	4,449	11,355	9,290
Female/male earnings ratio:							
All workers	Ratio	0.49	0.50	0.48	0.49	0.50	0.49
Full-time year-round	Ratio	0.56	0.57	0.54	0.56	0.57	0.57

1/ Includes only individuals who were in the labor force in the respective years.

Sources: 1960- 1970, and 1980 PUMS.

U.S. Department of Commerce, Bureau of the Census, "Labor Force Status-Persons 16 Years and Over by Age, Sex, Race, and Metropolitan-Nonmetropolitan Residence: 1970 and 1960," p. 55 in Current Population Reports, table 13, series P-23, No. 37, "Social and Economic Characteristics of the Population in Metropolitan and Nonmetropolitan Areas: 1970 and 1960," 1971.

U.S. Department of Commerce, Bureau of the Census, "Employment Status by Sex and Metropolitan and Nonmetropolitan Residence: 1970." pp. 1-418 in 1970 Census of Population, table 112, Vol. 1, Characteristics of the Population, part 1, United States Summary—Section 1, 1973.

U.S. Department of Commerce, Bureau of the Census, "Summary of Economic Characteristics: 1980." pp. 1-11 in 1980 Census of Population, table 73, Vol. 1, Characteristics of the Population, PC80-1-C1, 1983.

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Gender differentials are as noteworthy as those by place of residence. Throughout the period, labor force participation rates were consistently higher in metro areas for both sexes, but the evolution of these rates differed by gender. Whereas women's rate of labor force participation increased during the last two decades, men's rates declined. However, the participation rate differential between metro and nonmetro areas remained stable at 5 to 6 percentage points for men and women, respectively. The only minor deviation in these rates was a decrease in the female metro-nonmetro differential during the sixties, and subsequent increase during the seventies.

On most employment indictors, the social and economic advantages of metro workers are evident. Note, for example, that male metro workers had completed approximately 1 more year of schooling, on average, and earned consistently more than their nonmetro counterparts. Similarly, working women residing in metro areas maintained an educational advantage over their nonmetro counterparts, except that the magnitude of the schooling differential among women was about half that observed among men during this period, or roughly half a year (versus 1 year, on average, for men). Within areas of residence, however, the educational advantage corresponded to women rather than men. Over time, the educational differential between men and women narrowed, and by 1980 the gender gap in completed schooling among nonmetro workers had decreased by half a year. Apparently the 1970 educational parity between economically active men and women residing in metro areas was temporary, as men surpassed the educational achievement of their female coworkers during the seventies.

In light of the generally small educational differentials between metro and nonmetro working men and women, the gender gap in earnings, particularly among full-time, year-round workers is disturbing. Throughout the period the female-male earnings ratio hovered around 0.50 for all workers, and between 0.54 and 0.57 for those employed full-time on a year-round basis. The metro-nonmetro average annual earnings discrepancies were relatively unchanged over time for both men and women, ranging between 79 and 82 percent. For this to occur during a period of substantial industrial restructuring suggests either that men and women did not equally participate and benefit from these processes, and/or that the industrial and occupational placement mechanisms involve changes in the territorial division of labor, which essentially maintain in place the extant inequities. These empirical questions are explored in the remainder of the paper, and serve as a basis for formulating a research agenda.

9/ (continued) participation during the peak harvest seasons (Whitener, 1984). Although a reasonable amount of temporal comparability can be achieved using supplementary information provided by the Bureau, use of the 1980 PUMS increases the risk of confusing real changes in the occupational structure with artifactual change due to the new classification scheme. This point is discussed further in connection with the presentation of empirical results. Initially, I used the metro and nonmetro designation as changed by the Bureau in 1980, but in the 1980 analyses reported here I used constant SMSA boundaries over the 1970-80 period as a way of reducing the distortions resulting from changes in the definitions of SMSA's.

Industries

Table 2 contains a wealth of information about the industrial transformation of the U.S. labor force between 1960 and 1970. The index of dissimilarity (ID) provides a convenient way to summarize these results without unnecessarily belaboring detail. This index reveals that the industrial structures of metro and nonmetro areas became more similar over time, but the rate of convergence was very slow. In 1960, 18 percent of the labor force would have had to change industries for the metro and nonmetro industrial structures to be identical. By 1980, the ID value had dropped to 14.7, indicating that roughly a fifth of the convergence needed to achieve parity in the metro/nonmetro industry employment structures had occurred. Most of this convergence transpired during the sixties, when the index of dissimilarity decreased to 14.8; thereafter, the convergence was trivial, a finding in line with the notion of a slowdown in the industrial restructuring process during the seventies (Singelmann and Tienda, 1985). Owing to the extensive changes in the criteria used to designate metro areas in 1980 compared with previous years, it is unclear how much of the slowdown in the convergence of the metro/nonmetro industrial structures results from these definitional changes. That the transformation of the national industry employment structure also slowed during the seventies gives credence to our interpretation that most, if not all, of the slowdown in metro-nonmetro industrial convergence was real.

Census data indicate that the industrial transformation from goods- to service-producing industries slowed slightly during the seventies compared with its overall rate during the sixties, but the pace of change differed between metro and nonmetro areas. The index of dissimilarity comparing the 1960 and 1970 distributions was 8.6 for metro areas compared with 9.3 in nonmetro areas. The respective metro and nonmetro ID values of 8.8 and 7.1 indicate a continuation of industrial restructuring in both areas, but at a slower pace in nonmetro areas. In both decades, employment expanded in social and producer services, but the major source of employment decline shifted from the extractive sector during the sixties to the manufacturing sector during the seventies. That the decline in manufacturing employment began during the sixties in metro areas but not until the seventies in nonmetro areas suggests that the industrial restructuring process in rural areas lags about a decade behind that observed in urban areas. 10/

A closer inspection of table 2 shows how the changed criteria to report metro and nonmetro residence may have distorted our measurement of the industrial transformation of employment during the seventies. The most obvious evidence is the slightly increased share of workers who were engaged in extractive industries in both metro and nonmetro areas. Obviously, this employment sector is particularly sensitive to

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10/ This does not necessarily imply that the sequence of change will be identical, but there is sufficient similarity in the pattern of change to substantiate this inference.

Table 2—Industrial distribution of the U.S. labor force by metro/nonmetro residence and gender, 1960-80.

Sector and industry	1960						1970							1980					
	Metro			Nonmetro			Metro			Nonmetro				Metro			Nonmetro		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total 1/	Total 2/	Men	Women	Total	Men	Women	Total
Extractive	2.8	.7	2.2	18.0	3.9	13.5	2.6	.8	1.8	11.7	2.2	8.1	9.4	3.6	1.2	2.6	13.6	3.1	9.2
Agriculture	2.2	.6	1.7	15.7	3.7	11.9	2.0	.6	1.4	9.7	2.0	6.8	7.9	2.6	.9	1.9	10.1	2.7	7.0
Mining	.6	.1	.5	2.3	.2	1.6	.6	.2	.4	2.0	.2	1.3	1.5	1.0	.3	.7	3.5	.4	2.2
Transformative	45.5	24.2	38.5	40.5	24.4	35.5	41.8	20.6	33.7	43.5	26.7	37.2	34.4	38.0	18.1	29.4	38.9	21.0	31.5
Construction	8.4	.8	5.8	9.4	.6	6.6	8.3	1.0	5.5	10.4	.8	6.8	6.8	9.0	1.2	5.6	10.9	1.1	6.9
Food	3.6	2.4	3.2	3.3	2.3	3.0	2.2	1.3	1.8	2.6	1.6	2.2	2.1	1.8	1.1	1.5	2.5	1.6	2.1
Textile	1.7	5.4	3.0	3.4	10.0	5.5	1.2	3.5	2.1	3.5	9.8	5.8	4.4	1.2	2.8	1.9	2.2	6.4	3.9
Metal	6.7	1.9	5.1	3.6	1.0	2.8	4.9	1.2	3.5	3.7	1.0	2.7	2.6	4.2	1.2	2.9	3.3	1.0	2.4
Machinery	12.2	5.6	10.0	6.7	3.7	5.8	11.4	5.1	9.0	7.8	4.4	6.6	6.2	10.5	5.0	8.1	7.0	4.0	5.7
Chemicals	2.5	1.2	2.1	2.1	.8	1.7	2.1	1.0	1.7	2.0	.8	1.6	1.4	2.0	1.0	1.6	1.8	.8	1.4
Miscellaneous manufacturing	8.5	6.3	7.8	10.1	5.5	8.6	9.4	6.8	8.4	11.1	7.6	9.8	9.2	7.3	5.2	6.4	8.8	5.6	7.5
Utilities	1.9	.6	1.5	1.9	.5	1.5	2.3	.7	1.7	2.4	.7	1.7	1.7	2.0	.6	1.4	2.4	.5	1.6
Distributive services	24.1	21.0	23.0	21.2	17.7	20.0	24.7	22.0	23.6	21.4	18.1	20.2	20.5	23.2	19.5	21.7	21.0	17.5	19.5
Transportation	6.6	1.4	4.8	5.1	.8	3.7	5.6	1.6	4.1	4.2	1.0	3.0	3.1	5.3	1.7	3.8	4.5	.9	3.0
Communication	1.1	2.3	1.5	.7	1.8	1.0	1.3	2.0	1.6	.9	1.4	1.1	1.1	1.4	1.7	1.6	1.1	1.2	1.1
Wholesale	4.9	2.7	4.2	3.2	1.4	2.6	5.8	3.1	4.7	3.6	1.6	2.8	3.1	5.6	2.9	4.4	4.3	1.8	3.3
Retail	11.5	14.6	12.5	12.2	13.7	12.7	12.0	15.3	13.2	12.7	14.1	13.3	13.2	10.9	13.2	11.9	11.1	13.6	12.1
Producer services	7.5	10.3	8.3	3.5	4.8	3.9	8.1	11.1	9.4	4.0	5.4	4.6	5.0	9.9	14.1	11.7	5.3	8.5	6.5
Banking	1.4	3.1	2.0	.7	2.0	1.1	1.7	3.5	2.4	.9	2.2	1.4	1.5	1.7	4.2	2.8	.9	3.2	1.9
Insurance	1.8	3.1	2.2	1.1	1.2	1.1	1.7	2.7	2.1	1.0	1.1	1.1	1.2	1.6	3.0	2.2	1.0	1.4	1.1
Real estate	1.3	1.2	1.2	.5	.5	.5	1.2	1.2	1.2	.6	.6	.6	.6	1.5	1.8	1.6	.9	1.2	1.0
Engineering	.5	.2	.4	.2	.0	.2	.6	.2	.5	.3	.1	.2	.2	.9	.3	.6	.5	.2	.3
Accounting	.4	.3	.3	.1	.2	.2	.4	.5	.4	.2	.3	.2	.3	.4	.5	.5	.2	.4	.3
Miscellaneous producer services	1.6	1.8	1.7	.6	.5	.5	2.0	2.3	2.2	.8	.7	.8	.9	3.1	3.3	3.2	1.4	1.5	1.4
Legal services	.5	.6	.5	.3	.4	.3	.5	.7	.6	.2	.4	.3	.3	.7	1.0	.8	.4	.6	.5
Social services	12.6	25.7	17.0	10.5	26.3	15.7	15.4	31.5	21.6	13.3	30.8	19.9	20.6	17.0	35.0	24.9	14.6	35.9	23.5
Medical	1.0	2.8	1.6	.7	2.5	1.3	1.1	3.8	2.1	.8	3.9	2.0	2.0	1.3	4.9	2.9	1.0	5.8	3.0
Hospitals	1.1	6.4	2.9	.9	6.1	2.6	1.4	7.5	3.8	1.1	6.9	3.3	3.3	2.0	8.4	4.8	1.2	7.6	3.8
Education	2.9	9.6	5.2	3.4	12.5	6.3	4.8	13.1	7.9	5.1	14.6	8.6	8.6	5.3	12.7	8.5	5.4	14.6	9.2
Welfare	.8	1.5	1.0	.9	1.1	1.0	.8	1.7	1.2	.9	1.4	1.1	1.1	.7	.7	.7	.8	.6	.7
Nonprofit	.4	.6	.5	.2	.4	.3	.4	.6	.5	.2	.4	.3	.3	.3	.5	.4	.2	.3	.3
Postal service	1.4	.2	1.0	.9	.4	.7	1.4	.5	1.0	1.0	.5	.8	.8	1.0	.4	.8	.7	.4	.6
Public administration	4.8	4.4	4.6	3.4	3.2	3.4	5.2	4.0	4.8	4.1	3.0	3.7	4.3	5.6	5.1	5.4	4.8	4.7	4.8
Miscellaneous social services	.2	.2	.2	.1	.1	.1	.3	.3	.3	.1	.1	.1	.2	.8	2.3	1.4	.5	1.9	1.1
Personal services	7.8	18.0	11.2	6.3	22.9	11.5	7.5	14.2	10.0	6.0	17.0	10.1	10.0	8.0	12.1	10.0	6.6	14.1	9.7
Domestic	.4	7.2	2.7	.5	10.6	3.7	.2	3.1	1.3	.3	4.9	2.0	1.8	.1	1.4	.7	.1	1.9	.8
Hotels	.7	1.4	1.0	.6	1.8	1.0	.6	1.2	.8	.6	1.6	1.0	1.0	.7	1.5	1.1	.7	2.0	1.2
Eating and drinking	2.1	4.7	3.0	1.3	5.9	2.8	2.3	4.5	3.1	1.5	5.5	3.0	3.0	3.2	5.7	4.3	2.3	6.8	4.2
Repair services	2.0	.3	1.4	2.1	.3	1.5	2.0	.6	1.5	1.8	.4	1.3	1.4	2.1	.4	1.4	2.2	.3	1.4
Laundry	.8	1.8	1.1	.5	1.7	.8	.5	1.2	.8	.4	1.1	.9	.6	.3	.6	.4	.2	.5	.3
Barber and beauty	.6	1.4	.8	.5	1.5	.8	.4	1.5	.8	.4	1.7	.9	.8	.3	1.2	.7	.2	1.5	.8
Entertainment	.9	.8	.9	.6	.6	.6	1.0	.8	.9	.6	.6	.6	.7	1.1	1.0	1.1	.7	.8	.8
Miscellaneous personal services	.3	.4	.3	.2	.5	.3	.5	1.3	.8	.4	1.2	.7	.7	.2	.3	.3	.2	.3	.2
Total 3/	100.3	99.9	100.2	100.0	100.0	100.1	100.1	100.2	100.1	99.9	100.2	100.1	99.9	99.7	100.0	100.3	100.0	100.1	99.9

1/ Total excluding the not applicable observations for which residence was suppressed.
2/ Total including the not applicable observations for which residence was suppressed.
3/ Percentages may not sum to 100 because of rounding.

Source: 1960, 1970, and 1980 PUMS file.

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changes in the definition of geographic boundaries. 11/ This is largely an artifact of suppressing the residence information for nonmetro residents, as the share of agricultural workers in nonmetro areas rises to 7.8 percent, if these missing residence observations are included in the nonmetro category. 12/ Also, the 1980 share of agricultural workers in metro areas is artificially inflated not by the liberalized 1980 metro definition but owing to the changed reporting of geography in the A-sample.

With these caveats in mind, we proceed to make some cautious observations about the nature of the industrial restructuring processes during the past two decades. First note that, parallelling the national trend, transformative employment declined throughout the period in metro areas, falling roughly 4 percentage points in each decade. Nonmetro areas experienced a different pattern, involving a slight increase in manufacturing employment during the sixties, probably as a result of community development initiatives predicated on rural industrialization, followed by a rather sharp drop in transformative employment during the seventies. Throughout the period, the share of total employment engaged in manufacturing industries was higher in nonmetro as compared with metro areas, but this differential narrowed over time.

Service industries, particularly the social and producer services, registered the major employment gains as a consequence of decreased job opportunities in agriculture and manufacturing industries. Education and health-related industries recorded particularly high growth during the past 20 years, but even these industries showed signs of slowed growth during the seventies as compared with that witnessed during the preceding decade. Should this stagnation in health and education industries continue through the eighties, this tendency could negatively affect female employment for two reasons. Social service industries become more feminized over time, and by 1980 women constituted between 65 and 80 percent of all workers engaged in medical, hospital, and educational services. 13/ However, the contraction of these industries also could signal disproportionately higher unemployment rates for women, unless these declines are mitigated by job segregation so that women's employment in highly

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11/ For the 1960-70 comparisons tabulations, we eliminated all cases where metro-nonmetro residence was suppressed. Intertemporal comparability is not a problem since the suppression of metro-nonmetro residence information was similar in 1960. However, this was not the case in 1980. Thus to increase comparability during the latter period, we recomputed the total nonmetro column including the suppressed residence cases.

12/ Our decision to restrict the metro category in 1980 to the same set of SMSA's that existed in 1970 partly corrects for the liberalized definition of SMSA status adopted in 1980. However, the changed grouping of counties between periods limited our ability to make the residence classifications comparable over time.

13/ Auxiliary tabulations available from the author.

sex-typed jobs is protected. 14/ Also, because higher levels of feminization of jobs tends to increase earnings disparities between men and women (Tienda and Ortiz, 1985) the positive earnings effects (through rising demand), which has partly offset the negative effects on wages associated with feminization of industries, may not be forthcoming. Thus, stagnation of employment in these female-dominated industries could limit possibilities of reducing gender inequities in the future.

Neither personal nor distributive services changed their relative levels of employment much during the 1960-80 period, although some modest changes were discernible. As the domestic service industry declined, it also became slightly more feminized and more so in nonmetro compared with metro areas. Eating and drinking establishments were a source of employment growth in the personal services sector. That eating and drinking services continued to expand throughout the period both in metro and nonmetro areas prevented employment in personal services from declining over time.

An examination of gender differences in the allocation of labor illustrates yet another dimension of the changing employment structure brought about through the shift from goods to service production. During the past two decades, gender differences in the industrial placement of workers were consistently greater in nonmetro areas. The industrial configuration of the male and female labor forces converged during the sixties, as the index of dissimilarity values comparing their employment structures dropped from 38.4 to 36.0 in metro areas, and from 45.8 to 41.4 in nonmetro areas. However, gender inequities in the industrial structure of employment increased during the seventies in nonmetro areas as the index value rose to 42.5, but in metro areas, the gradual convergence of the male and female industrial structures proceeded at approximately the same slow pace observed during the earlier decade.

In nonmetro areas, the divergence in the industrial allocation of labor by gender during the seventies can be traced to the differential impact of service expansion for men and women. Specifically, the relatively large increase of social and producer jobs had more visible changes on women than men. Note, for example, that in nonmetro areas, the share of women engaged in producer services increased by 2.3 percent during the seventies, whereas the comparable increase for men was less that 1 percent. Even more striking is the differential rise in the share of nonmetro men and women holding social service jobs: for men, the percentage increase was slightly over 1 percent, while for women the change was roughly 5.5 percent. Although changes in the industrial allocation of labor by sex were similar in metro areas, the differences between men and women were less pronounced. These changes may have contributed to the convergence of men's and women's unemployment rates documented by Nilsen (1984).

14/ Sigurd Nilsen (1984), however, showed that the changes in the industrial mix of the labor force reduced unemployment, more so for women than for men, but he did not focus on social services in any depth.

The equity implications of these changes are mixed. On the one hand, the growth of jobs where the demand for labor is based partly on gender makes possible the absorption of greater numbers of women into paid employment. On the other hand, gender specificity in the demand for labor results in extensive job segregation between men and women, which, in turn, usually increases the gender gap in earnings (Tienda and Ortiz, 1985). The net effect of these forces is potentially ambiguous, but can be deciphered through a multivariate analysis later.

Occupations

Both metro and nonmetro areas participated in the long-term shift from manual to nonmanual occupations (Singelmann and Browning, 1980), although not at uniform rates. Nevertheless, the metro and nonmetro occupational structures became more similar over time, with the index of dissimilarity dropping from 13.7 in 1960, to between 12.7 and 11.9 in nonmetro areas, depending on how missing cases are allocated. By 1980, metro and nonmetro occupational structures differed by approximately 12 percent.

Census data indicate not only that the process of occupational change slowed considerably during the seventies compared with its pace during the previous decade, but also that the rate of slowdown differed between metro and nonmetro areas. During the earlier period, the occupational changes proceeded slightly faster in nonmetro areas (ID values = 5.9 and 6.9 for metro and nonmetro areas, respectively). However, between 1970 and 1980, not only were there fewer occupational changes overall, but the stagnation in the process of occupational change was greater in nonmetro areas (ID values = 4.9 for metro areas, and between 5.3 and 4.6 for nonmetro areas, depending on the exclusion and inclusion of residence- suppressed observations in 1970). In part, these growing temporal divergencies in the pace of occupational change can be traced to the leveling off of farm-related employment during the seventies, a trend that disproportionately affected nonmetro areas. 15/

Closer inspection of the changing occupational structure reveals that, throughout the period, high-status professional, semiprofessional and managerial occupations engaged a higher share of all workers in metro than in nonmetro areas. The sixties maintained residential differences in the prevalence of semiprofessional jobs, while increasing differences in the share of professional jobs; the latter expanded faster in metro areas. Although managerial jobs declined slightly faster in metro than in nonmetro areas, because of the more rapid growth of professional jobs in metro areas, metro/nonmetro differentials in the share of employment comprised by the three highest status occupations widened during the sixties. Stated differently, the occupational status advantage of metro areas reflected by the share of workers holding professional, semiprofessional, or managerial positions gradually increased from 3.8 percentage points in 1960 to 4.4 percentage points in 1970, and to 6.9 percentage points in 1980.

15/ The slight increase in the share of farmers in metro areas is an artifact of noncomparable metro boundaries over time.

Table 3—Occupational distribution of the U.S. labor force by metro/nonmetro residence and gender: 1960-80

Occupation	1960						1970							1980					
	Metro			Nonmetro			Metro			Nonmetro				Metro			Nonmetro		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total 1/	Total 2/	Men	Women	Total	Men	Women	Total
									- Percentage -										
Professional	10.7	12.4	11.3	7.2	12.8	9.0	13.4	14.5	13.8	9.0	13.4	10.6	11.1	13.7	16.3	14.8	9.1	14.9	11.5
Semiprofessional	2.0	1.4	1.8	1.2	1.0	1.2	2.4	1.7	2.2	1.9	1.3	1.7	1.7	2.9	3.0	2.9	2.1	2.5	2.2
Farmer	1.0	.1	.7	9.5	1.0	6.8	.6	.1	.4	5.2	.5	3.5	4.4	1.0	.2	.7	5.7	.8	3.7
Manager	12.0	3.8	9.2	10.2	4.0	8.3	11.6	3.6	8.6	10.5	3.6	7.9	8.0	14.5	7.1	11.3	12.6	6.1	9.9
Clerical	9.0	35.8	18.0	5.0	23.5	10.9	8.8	38.2	20.1	5.6	26.7	13.5	14.0	8.2	36.5	20.4	5.2	29.2	15.1
Sales	8.0	8.3	8.1	5.7	8.2	6.5	7.8	7.7	7.8	5.6	6.7	6.0	6.0	7.0	6.8	6.9	5.2	6.0	5.5
Craft	21.8	1.3	14.9	19.8	1.1	13.8	20.9	1.7	13.5	22.0	2.2	14.6	14.4	19.4	2.0	11.9	21.2	2.1	13.3
Operative	20.8	15.7	19.0	22.8	19.7	21.8	18.8	12.5	16.4	22.5	20.0	21.6	19.9	17.0	10.0	14.0	20.4	15.0	18.1
Service	7.3	20.4	11.7	5.4	25.7	11.8	8.7	18.9	12.6	7.0	23.4	13.2	13.0	9.5	16.6	12.6	8.1	20.6	13.2
Laborer	6.6	.5	4.6	8.2	.7	5.8	6.2	.9	4.1	7.6	1.3	5.3	5.1	6.1	1.3	4.0	7.7	1.9	5.3
Farm laborer	.8	.3	.7	5.1	2.2	4.2	.6	.2	.5	3.0	.9	2.2	2.3	.7	.3	.5	2.9	1.0	2.1
Total 3/	100.0	100.0	100.0	100.1	99.9	100.1	99.8	100.0	100.0	99.9	100.0	100.1	99.9	100.0	100.1	100.0	100.2	100.1	99.9

1/ Total excluding the not available observations for which residence was suppressed.
2/ Total including the not available observations for which residence was suppressed.
3/ Percents may not sum to 100 because of rounding.

Source: 1960, 1970, and 1980 PUMS files.

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At the opposite end of the occupational spectrum, the lower status service, laborer, and farm laborer positions remained more pervasive in nonmetro than in metro areas throughout the period. However, the faster decline of service and laborer occupations in nonmetro areas resulted in a slight narrowing of the metro/nonmetro differences in the prevalence of these low-status jobs during the sixties and seventies.

Sales employment decreased steadily in both metro and nonmetro areas, and, since the pace of decline was roughly similar, the metro/nonmetro employment differential in sales remained unchanged over time. Employment differentials in clerical, operative, and craft employment also narrowed during the two-decade period. Since the decline in operative employment was steeper in metro than in nonmetro areas during the earlier period, the metro/nonmetro differentials in operative employment widened during the sixties, and subsequently narrowed thereafter. Over time, the share of clerical employment has increased in both metro and nonmetro areas, while sales, craft, and operative employment declined.

An alternative perspective of metro/nonmetro occupational inequality emerges from gender differences in labor allocation patterns. Over the last two decades, the male and female occupational structures converged somewhat. But owing to the persistence of job segregation between men and women, gender differences in occupational placement were consistently large over time and within metro/nonmetro areas. Moreover, changes in the extent of convergence of the male and female occupational structures depended on place of residence. For example, the index of dissimilarity indicates that in 1960, 41.9 percent of metro workers and 47 percent of nonmetro workers would have had to change occupations to achieve gender equality in occupational placement. In 1970, the ID values for metro and nonmetro areas had fallen to 40.6 and 42.9, respectively, indicating a faster pace of convergence in nonmetro areas.

However, this pattern was reversed in 1980 due to a divergence in nonmetro areas and gradual convergence in metro areas of the male and female occupational structures. By 1980, the index of dissimilarity values comparing the male and female occupational structures in metro areas had declined slightly, to 38.8, but had increased slightly to 43.5 in nonmetro areas. If the metro areas can be viewed as setting the timetable for reducing gender inequities in the employment structure, our comparisons suggest that nonmetro areas are at least two decades behind metro areas in moving toward occupational parity between men and women. That is, as of 1980, nonmetro areas exhibited a greater level of sex segregation in occupational placement than did metro areas at the start of the period.

To recapitulate, we have outlined, in broad terms, variation in the course of industrial and occupational change over time and according to type of area. Our previous discussion of the industrial transformation showed that both metro and nonmetro areas participated in the shift from a goods to a service economy, and both experienced an increased division of labor within industries. Whereas traditionally one type of occupation dominated employment in a given industry, the continued division of labor has reduced the degree of such concentration. However, nonmetro areas continue to exhibit lower levels of occupational differentiation within industries.

Following the interpretation of Browning and Gibbs (1971), who claimed that the extent of intraindustry occupational differentiation is an expression of ecological disparities in development, we computed for each industry an index, OD, to measure differences in the technical division of labor. 16/ These results largely support the premise that nonmetro areas lag slightly to moderately behind metro areas in economic development. The major sources of these disparities are easily traced to five industries (agriculture, mining, textiles, machinery, and repair services), two of which directly reflect the territorial specialization of agriculture and mining in nonmetro areas.

Over time and as the industrial restructuring processes unfolded, the technical division of labor within industries increased. This is evident from the rising occupational differentiation (OD) values for detailed industries. In some instances, this process operated to reduce metro-nonmetro differences in intraindustry occupational specialization as observed in industries such as construction, utilities, communication, education, hotel, laundry, and miscellaneous personal services. However, in many other instances, the restructuring processes either increased disparities between metro and nonmetro areas in the extent of occupational specialization or left existing inequities intact.

As indicators of territorial divergencies in economic development, the OD values are quite crude. Yet they serve to identify industries where the restructuring processes may produce greater metro/nonmetro inequities over time, either by diversifying employment and production structures more in metro than in nonmetro areas or by leaving the metro/nonmetro inequities in OD totally unaltered. In either instance, it is appropriate to examine in more detail the mechanisms that govern changes in intraindustry occupational differentiation and on this basis determine whether existing patterns could be altered through selective policy interventions.

That the industrial restructuring processes have affected men and women differently, depending on their place of residence, suggests one of many possible links between the social inequities and the structural transformation of employment in the course of development. The following section, which integrates the descriptive results reported in tables 2 and 3, specifies with greater precision the relative importance of industrial transformation and intraindustry occupational recomposition in altering the occupational structure over the past two decades. Subsequently, we examine socioeconomic expressions of inequality associated with the process of occupational change, and illustrate differential territorial outcomes depending on gender.

16/ Computed as $1-[\Sigma x^2/(\Sigma x)^2]$

The Process of Occupational Change

Given the residential and temporal variation in the pace and nature of employment transformation during the past two decades, we now attempt to isolate the relative contributions of industrial shifts and intraindustry occupational recomposition in producing changes in the metro and nonmetro occupational structure over time. We use the shift-share technique as adapted from Singelmann and Browning (1980) for this analysis. This method decomposes period-specific changes in occupational structures into the following three components:

- an industry shift, which represents the net change in the occupational structure attributable to the transformation of the industry structure;
- an occupation mix effect, which represents the net change in the occupational structure resulting from changes in the technical division of labor within industries;
- an interaction effect, which reflects changes in the occupational structure arising from the joint influence of industry shifts and occupation mix effects.

The results of our computation are presented in tables 4 and 5, respectively, for the 1960-70 and the 1970-80 periods. The structural shifts establish how the growth or decline of specific jobs contributed to socioeconomic inequities between metro and nonmetro labor markets. The sum of industry shifts, changed occupational mix, and interaction shifts, which produce the net shift column, indicates the extent to which a given occupational category grew (or declined) faster than the total labor force. For example, a positive net absolute shift, as occurred in professional and semiprofessional employment during the sixties (table 4), indicates that the allocation of metro and nonmetro workers into these occupations outpaced the growth of the metro and nonmetro labor force. Column (2) expresses the net shift as a fraction of the size of the occupational category at the start of the period, and thus is a more easily interpretable statistic for comparing relative changes over time and across metro and nonmetro markets. 17/

That the industrial restructuring processes were not identical in metro and nonmetro areas is evident both from the differing magnitudes (and, in the instance of crafts jobs, the direction) of relative net shifts for each occupational category and from differences in the mechanisms producing these changes (that is, industry shifts versus changed occupational composition). Although the process of occupational change in many ways was similar between metro and

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17/ The net shifts that were computed from a direct standardization procedure do not represent actual persons. Moreover, because some net changes are quite small in magnitude (while others are very large), a larger relative contribution by either the industry shift or the occupational mix components would affect an occupational category less than a smaller share of large net shifts. These scale effects are reflected in the percentage shift computations (cols. 6, 7 and 8 of tables 4 and 5). Therefore, to clarify the meaning of these calculations, we expressed the absolute net shifts relative to the size of the occupational category at the beginning of the period, and denoted this (second) column, relative net shifts.

Table 4—Components of change in the occupational allocation of metro and nonmetro workers for the total United States, 1960-70

Area and Occupation	Net absolute shift (1)	Net relative shift (2)	Absolute shifts: Industry shift effect (3)	Absolute shifts: Occupation mix effect (4)	Absolute shifts: Interaction shift effect (5)	Percentage shifts: Industry shift effect (6)	Percentage shifts: Occupation mix effect (7)	Percentage shifts: Interaction shift effect (8)
			thousands	thousands	thousands	percent	percent	percent
Metro:								
Professional	10,909.0	26.4	12,928.0	521.8	-2,540.8	118.5	4.8	-23.3
Semiprofessional	1,904.0	29.1	620.4	1,224.1	59.5	32.6	64.3	3.1
Farmer	-1,110.2	-45.1	-621.0	-604.4	115.2	55.9	54.4	-10.4
Manager	-2,928.5	-8.7	763.2	-3,744.7	53.0	-26.1	127.9	-1.8
Clerical	9,309.2	14.1	3,408.8	5,301.8	598.6	36.6	57.0	6.4
Sales	-1,393.8	-4.7	1,126.0	-2,556.1	36.3	-80.8	183.4	-2.6
Craft	-5,932.8	-10.9	-3,742.4	-2,244.6	54.2	63.1	37.8	-.9
Operative	-11,809.1	-17.0	-10,189.2	-1,312.0	-307.9	86.3	11.1	2.6
Service worker	3,635.8	8.5	-1,971.6	4,043.7	1,563.7	-54.2	111.2	43.0
Laborer	-1,582.8	-9.6	-1,696.9	-165.7	279.8	107.2	10.5	-17.7
Farm laborer	-1,000.7	-40.4	-625.3	-463.9	88.4	62.5	46.4	-8.8
Total	0		0	.1	-.1	NA	NA	NA
Nonmetro:								
Professional	2,441.3	17.6	4,205.7	-861.8	-902.5	172.3	-35.3	-37.0
Semiprofessional	964.3	54.5	311.7	629.0	23.6	32.3	65.2	2.4
Farmer	-5,654.9	-53.8	-5,153.9	-900.4	399.3	91.1	15.9	-7.0
Manager	-504.8	-4.0	675.0	-1,286.5	106.7	-133.7	254.8	-21.1
Clerical	4,281.0	25.4	1,803.6	2,384.7	92.8	42.1	55.7	2.2
Sales	-872.9	-8.7	465.4	-1,285.2	-53.1	-53.3	147.2	6.1
Craft	1,468.2	6.9	788.1	729.7	-49.6	53.7	49.7	-3.4
Operative	-56.8	-.2	749.3	-717.4	-88.7	-1,319.3	1,263.0	156.2
Service worker	1,995.5	10.9	-687.3	2,050.4	632.4	-34.4	102.8	31.7
Laborer	-747.1	-8.4	6.9	-474.3	-279.7	-.9	63.5	37.4
Farm labor	-3,313.8	-51.3	-3,164.6	-268.2	118.9	95.5	8.1	-3.6
Total	0		-.1	0	.1	NA	NA	NA

NA = Not applicable.

Source: 1960, 1970, and 1980 PUMS files.

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Table 5—Components of change in the occupational allocation of metro and nonmetro workers for the total United States, 1970-80

Area and Occupation	Net absolute shift (1)	Net relative shift (2)	Absolute shifts: Industry shift effect (3)	Absolute shifts: Occupation mix effect (4)	Absolute shifts: Interaction shift effect (5)	Percentage shifts: Industry shift effect (6)	Percentage shifts: Occupation mix effect (7)	Percentage shifts: Interaction shift effect (8)
			thousands	thousands	thousands	percent	percent	percent
Metro:								
Professional	12,021.1	15.7	11,741.6	1,542.5	-1,263.0	97.7	12.8	-10.5
Semiprofessional	6,120.8	49.6	2,468.0	4,074.2	-421.5	40.3	66.6	-6.9
Farmer	-5,525.6	-68.6	-3,384.5	-3,154.4	1,013.3	61.3	57.1	-18.3
Manager	20,665.8	41.8	1,277.7	19,797.7	-409.6	6.2	95.8	-2.0
Clerical	9,448.9	8.5	4,758.5	5,412.5	-722.0	50.4	57.3	-7.6
Sales	-4,850.0	-11.1	-1,470.9	-3,895.6	516.5	30.3	80.3	-10.6
Craft	-14,053.1	-17.7	-6,046.6	-7,352.0	-654.5	43.0	52.3	4.7
Operative	-20,203.1	-21.0	-12,556.1	-8,786.5	1,139.5	62.1	43.5	-5.6
Service worker	649.9	.9	7,891.4	-8,471.6	1,230.1	1,214.2	-1,303.5	189.3
Laborer	-2,169.8	-8.8	-2,684.3	995.3	-480.8	123.7	-45.9	22.2
Farm laborer	-2,104.8	-44.3	-1,994.7	-162.1	52.0	94.8	7.7	-2.5
Total	0		.1	.1	-.1	NA	NA	NA
Nonmetro:								
Professional	1,411.1	4.9	2,630.9	-659.9	-559.9	186.4	-46.8	-39.7
Semiprofessional	969.9	20.7	473.1	536.4	-39.6	48.8	55.3	-4.1
Farmer	-1,647.9	-13.9	-901.0	-826.3	79.4	54.7	50.1	-4.8
Manager	3,824.9	17.8	347.8	3,595.3	-118.2	9.1	94.0	-3.1
Clerical	2,484.7	6.7	811.8	1,716.3	-43.4	32.7	69.1	-1.7
Sales	-1,035.4	-6.5	-276.0	-901.3	141.8	26.7	87.0	-13.7
Craft	-2,552.2	-6.6	-697.2	-1,784.8	-70.2	27.3	69.9	2.8
Operative	-3,992.7	-7.5	-2,972.7	-1,163.0	143.0	74.5	29.1	-3.6
Service worker	745.0	2.2	1,619.5	-1,410.0	535.5	217.4	-189.3	71.9
Laborer	352.5	2.6	-559.1	988.7	-77.1	-158.6	280.5	-21.9
Farm laborer	-559.8	-8.9	-477.2	-91.3	8.7	85.3	16.3	-1.6
Total	0		-.1	0	.1	NA	NA	NA

NA = Not applicable.

Source: 1960, 1970, and 1980 PUMS files.

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nonmetro areas and generally mirrored changes observed at the national level (Singelmann and Browning, 1980; Singelmann and Tienda, 1985), several noteworthy differences over time and place deserve comment. These differences are highlighted for broad occupational groupings.

Upper White Collar Jobs. During the sixties, both metro and nonmetro areas experienced an increase in professional and semiprofessional employment, but the growth of professions was relatively faster in metro areas. Semiprofessional jobs expanded more rapidly in nonmetro areas between 1960 and 1970. Professional employment growth slowed considerably during the seventies, but much more so in nonmetro areas, where it virtually stagnated. This stagnation resulted largely from the strong intraindustry occupational reorganization away from professional jobs and the conditional influence of industrial shifts and changing occupational mixes of industries. In both areas, the transformation of the employment structure toward industries that employ professionals was the dominant mechanism accounting for the growth of this occupation during the sixties. However, in nonmetro areas, the expansion of professional employment would have been even faster had the intraindustry occupational recomposition and the interaction effects of industry shift and changing occupational mix not offset the effects of the industrial restructuring process.

The interdecade changes in semiprofessional employment also worked against nonmetro areas in that, contrary to the pattern of the sixties, metro areas profited more than nonmetro areas from the growth of these jobs. Whereas the mechanisms producing vigorous growth of semiprofessional employment during the sixties were virtually identical in metro and nonmetro areas, during the latter period intraindustry occupational restructuring toward semiprofessional jobs was more vigorous. The slowed growth of semiprofessional employment in nonmetro areas during the seventies compared with the sixties largely resulted from the fact that industrial shifts, which were less extensive during the latter period, were the basic source of semiprofessional growth.

Both metro and nonmetro areas registered slight decreases in managerial employment between 1960 and 1970, and the underlying sources of change were relatively similar. The 4-percent relative decline in nonmetro managerial employment would have been much stronger had the industrial restructuring processes not shifted toward industries that employ large shares of managers. This served to offset the changes in the technical division of labor within industries against managerial employment in both metro and nonmetro areas.

During the most recent period, however, we observed what appears to be an explosive growth of managerial jobs, particularly in metro areas. A large share of the growth in managerial employment during the seventies derives from the changes in the occupational classification in 1980. 18/ That this changed classification affected metro and

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18/ The 1980 occupational scheme used by the Bureau of the Census reclassified several occupations as managerial activities that belonged to other occupational categories in 1970. This reclassification also affected professional occupations.

nonmetro areas in roughly equal ways is suggested by the similar relative components of occupational change (cols. 6, 7, and 8 in table 5). However, the faster relative net growth of managerial employment in metro compared with nonmetro areas (42 percent versus 18 percent) is not an artifact of definitional changes. Like the interdecade shifts observed in professional and semiprofessional employment, the net change in the prevalence of managerial jobs favored metro areas, thus creating greater occupational inequalities over time between areas.

Lower White-Collar Jobs. Throughout the two-decade period, clerical jobs expanded while sales jobs declined. The expansion of clerical jobs was much faster during the sixties, particularly in nonmetro areas (see col. 2 in table 4). Although the mechanisms producing the growth of clerical employment in metro and nonmetro areas were roughly similar over time (compare cols. 6, 7, and 8 in tables 4 and 5 for clerical occupations), during the seventies clerical occupations expanded only modestly--8.5 and 6.7 percent in metro and nonmetro areas, respectively.

Sales occupations declined faster during the seventies in metro areas but slower in nonmetro areas. The mechanisms responsible for shrinking sales occupations were similar between metro and nonmetro areas in each period, but the conditional effect of industry declines coupled with occupational recomposition largely explain the change in employment away from sales jobs during the most recent period.

Blue-Collar Jobs. The decline of craft and operative occupations during the past two decades was exceeded only by that of farmers and farm laborers. However, between 1960 and 1970, the craft occupations expanded by 7 percent in nonmetro areas, while metro areas registered an 11-percent decrease. Both economic restructuring away from industries that employ crafts workers and internal reorganization of industries away from these jobs explain the 20-year decrease of craft occupations in metro areas and the 1970-80 drop in craft employment in nonmetro areas. The 7-percent increase in craft jobs during the sixties resulted from the growth of manufacturing industries that relied on these occupations and from the reorganization of firms toward increased utilization of craft jobs. This outcome can be linked mostly to the rural industrialization initiatives which were popular strategies for economic development during the sixties.

Different transformation mechanisms were responsible for the decline in operative and laborer occupations during the sixties, and to a lesser extent, during the seventies. In metro areas, the relative decrease in the number of operative and labor positions resulted both from the contraction of those industries that traditionally relied on these jobs in the past, as well as an intraindustry reorganization away from operative and laborer occupations. In both periods, the strong, negative industry shift was the major source of declining operative and labor occupations. However, the decline in laborer employment would have been more dramatic if the reorganization of firms toward a greater reliance on unskilled workers had not offset part of the decline stemming from industrial shifts away from firms that require laborers.

The decline of operative and laborer jobs in nonmetro areas during the sixties was less intense than observed in metro areas because of the growth of manufacturing industries. (Note the positive industry shifts in nonmetro areas for these occupations in table 4.) Employment opportunities resulting from this form of industrial restructuring offset the movement away from operative and laborer jobs within industries. As the possibilities to pursue rural industrialization dwindled, this development strategy ceased to maintain nonmetro operative employment. Thus, operative employment contracted during the seventies, due to strong and reinforcing industry and occupation mix effects. However, the net decline was less than the metro decline. Industrial shifts rather than occupational recomposition was the dominant force producing this result.

Despite the decline of industries that utilize large shares of laborer jobs, these jobs registered a slight increase in nonmetro areas during the seventies, reversing the trend of the previous decade, due to an intraindustry recomposition toward menial jobs. This change is cause for concern because it signals the possibility of occupational degradation and deskilling of nonmetro job tasks, and, like the uneven growth of high-status jobs in metro and nonmetro areas, has direct implications for the earnings disparity between metro and nonmetro workers.

In contrast to laborer and operative jobs, service occupations expanded continuously between 1960 and 1980, although at a faster pace during the first decade. The mechanisms producing this increase were quite similar between areas for both decades, yet service jobs registered an intertemporal change in the components of occupational change. During the sixties, the net growth of employment in service occupations resulted almost exclusively from changes in the technical division of labor within industries toward a greater reliance on these jobs. In contrast, during the seventies, it was largely the industrial transformation toward services that explained the modest positive growth of service occupations.

Predictably, farmer and farm laborer occupations declined rapidly during the sixties owing to the substitution of machines for workers and to the reorganization of the industry required by highly concentrated and large-scale operations. That the rate of decline of farmer and farm laborer occupations slowed during the seventies is less surprising than the stronger negative shifts produced in metro areas. This is probably an artifact of the noncomparable residence categories over time, but there is no way to estimate the relative importance of these declines with much precision. These changes may also result from reformation of residence categories for permanent and temporary farmworkers between 1970 and 1980, as well as the noncomparability of farmworker employment information based on census data (see Whitener, 1984).

On balance, our results show net occupational upgrading over time in that the top three occupations (professional, semiprofessional, and managerial jobs) continued to expand faster than the total labor force during the past two decades. Moreover, low-skill blue-collar jobs comprised a smaller share of total employment over time. That the process of occupational change did not unfold uniformly in metro and nonmetro areas is interesting in its own right but more so because of its direct implications for the extent and nature of socioeconomic inequality between metro and nonmetro areas. Specifically, the faster growth of the upper white-collar jobs and faster decline of blue-collar jobs in metro than in nonmetro areas affects the aggregate earnings gaps among workers over time. We illustrate this in the following section.

Equity Implications of Industrial Restructuring, A Preliminary Overview

My interest in the transformation of the economy from goods to service production derives from the potential this holds for reducing earnings inequities between metro and nonmetro areas and among various groups of workers. With respect to the former, the preliminary empirical evidence shows signs of hope in that the occupational structures of metro and nonmetro areas have become more similar over time, despite differences in the prevalence of selected occupational categories (for example, farming versus professional services) and in the mechanisms producing these changes. With respect to gender inequities stemming from industrial restructuring, the evidence is mixed. On the one hand, some have claimed (see Norwood, 1980) that the expansion of services during the past couple of decades has greatly facilitated the entry of women into the labor force and may have contributed to narrowed unemployment levels between the sexes (Nilsen, 1984). On the other hand, and despite the substantial increases in women's labor market activity since 1950, there has been relatively little change in the female-male earnings ratio.

In principle, the shift from goods production to services could help close the earnings differentials between metro and nonmetro workers, as well as between men and women. This would follow from continued occupational upgrading and converging employment structures. However, if the decline of farm industries in rural and nonmetro areas resulted in a disproportionate expansion of middle-level professional, semiprofessional, and managerial positions, while the highest ranking jobs within these professions became more concentrated in metro and urban areas, then it is conceivable that the industrial restructuring processes will not reduce the territorial bases of income differentiation.

Likewise, if the industrial transformation of employment toward services resulted in the growth of low-wage service jobs that are disproportionately held by women and other disadvantaged groups (for example, the elderly, minorities, immigrants), then it is conceivable that little or no change in earnings gaps will proceed from industrial restructuring, regardless of its scope. That the gender gap in earnings narrowed very slightly since 1960, despite women's increased representation in high-status occupations, lends support to this interpretation of persisting labor market inequities between men and women. Similarly, preliminary descriptive results show that the industrial restructuring processes narrowed only slightly earnings differences between metro and nonmetro workers between 1960 and 1980. However, the average earnings differentials between metro and nonmetro areas were notably lower than those between men and women throughout the period (table 6).

The information presented in table 6 illustrates in broad descriptive terms the gender and residence inequities in education and earnings among broad occupational groups for the period under consideration. 19/ Although the metro/nonmetro differences in the gender composition of employment were small, roughly 1.5 to 2 percent between 1960 and 1980, there were much greater differences within occupation groups. One striking difference is the higher level of feminization of professional occupations in nonmetro than in metro areas, a pattern that persisted throughout the period. Whether this indicates that nonmetro women workers are better off than their metro counterparts is less clear because their occupational status advantage is not reflected in their average earnings. More than likely, this reflects the differing industry structure in which nonmetro professionals work, as well as systematically lower wages paid to nonmetro workers (see Nilsen, 1978, for some discussion of this point).

Education and earnings disparities between the metro and nonmetro workforce consistently favored metro residents. Working women were slightly better educated than working men, but the gender gap in schooling closed over time. In nonmetro areas, the 0.8-year female educational advantage observed in 1960 closed to 0.3-year by 1980. Sex differences in schooling were much narrower in metro areas, roughly 0.2 of a year, but the slight female advantage in 1960 had become a slight male advantage in 1980. Residence comparisons within sex reveal that the metro/nonmetro differences have remained unchanged throughout the past two decades despite the massive demographic changes that altered the rural and urban population distributions. Metro working women completed, on average, almost half a year more of graded schooling than their nonmetro counterparts, while the respective differential among men was roughly 1 year.

Gender and residence differences in completed schooling translated into more substantial earnings differences. For example, the average educational attainment of professional women was roughly similar in both metro and nonmetro areas, yet throughout the period, professional women in nonmetro areas earned consistently less than their similarly employed metro counterparts. This earnings disparity between metro and nonmetro professional women persisted throughout the period, while professional employment became more feminized.

Increased representation of women in professional jobs did not alter much the average female/male earnings ratio during the period. In fact, the earnings inequities between professionally employed men and women actually increased over time in both metro and nonmetro areas. Whereas professionally employed women residing in nonmetro areas earned 56 percent of what professional men earned, by 1980 the

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19/ Although we focus on gender differences in socioeconomic achievements, similar comparisons could be extended to other labor segments such as age groups and racial and ethnic groups. As such, our discussion of inequality through gender comparisons should be considered as illustrative.

Table 6—Gender composition, education and earnings differences among occupational groups for metro and nonmetro areas, 1960-80

Area and Occupation	Female			Mean education						Mean earnings, all workers					
	1960	1970	1980	1960		1970		1980		1960		1970		1980	
				Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
	— Percent —			Years						Dollars					
Metro:															
Professional	37.1	40.4	47.6	15.3	14.7	15.5	14.9	16.4	15.4	7,398	3,859	11,810	6,219	23,523	11,567
Semiprofessional	25.6	30.8	44.2	12.8	13.2	13.3	13.7	13.9	13.8	5,486	3,318	8,770	5,117	16,288	9,549
Farmer	6.1	8.5	11.2	9.0	9.5	10.2	10.6	11.3	12.0	3,831	1,743	8,040	3,439	15,756	7,698
Manager	14.0	16.3	27.1	12.0	11.4	13.1	12.4	14.0	13.3	8,663	4,158	13,884	6,736	24,850	12,187
Clerical	67.1	73.2	77.3	11.5	11.7	12.0	12.0	12.8	12.4	4,694	3,018	7,323	4,306	14,239	8,275
Sales	34.6	38.1	42.6	11.9	10.7	12.6	11.3	13.5	12.4	5,951	1,872	9,724	2,887	19,221	7,044
Craft	3.0	4.9	7.1	9.9	10.3	10.6	10.7	11.6	11.6	5,608	3,224	8,705	5,000	16,549	9,967
Operative	27.8	29.5	30.8	9.2	8.9	10.0	9.6	11.0	10.4	4,539	2,521	6,974	3,861	14,053	7,784
Service worker	58.7	57.5	57.0	9.2	9.1	10.2	10.1	11.4	11.1	3,524	1,487	5,459	2,584	10,140	5,189
Laborer	3.6	8.0	14.0	8.3	9.0	9.6	9.9	10.7	11.0	3,491	2,289	5,174	3,336	10,185	6,450
Farm laborer	16.7	17.3	23.4	7.0	7.6	8.2	8.8	9.1	9.9	2,016	1,106	3,528	1,891	7,607	4,827
Total	33.8	38.6	43.2	10.8	11.0	11.7	11.7	12.7	12.6	5,437	2,687	8,750	4,210	17,255	8,516
Nonmetro:															
Professional	45.5	47.2	53.4	15.2	14.7	15.4	14.8	16.2	15.1	5,980	3,336	9,838	5,405	20,593	9,733
Semiprofessional	26.9	28.3	45.6	12.5	12.8	13.0	13.1	13.4	13.2	4,837	2,747	7,667	4,558	14,855	8,254
Farmer	4.9	5.2	8.9	8.4	8.6	9.8	9.8	11.2	11.8	2,929	1,328	5,546	2,963	14,962	7,903
Manager	15.5	17.1	25.5	11.4	11.0	12.3	11.9	13.2	12.6	6,792	3,207	10,694	5,283	20,656	9,888
Clerical	68.8	74.0	79.8	11.4	11.9	11.8	12.1	12.4	12.3	4,323	2,467	6,583	3,508	13,534	7,068
Sales	40.2	41.6	44.8	11.3	10.7	11.9	11.2	12.9	12.0	4,439	1,421	7,719	2,483	16,078	5,412
Craft	2.6	5.8	6.6	9.5	10.2	10.3	10.5	11.3	11.5	4,649	2,574	7,193	4,402	14,873	8,314
Operative	28.8	34.8	34.1	8.9	9.2	9.8	9.9	10.8	10.7	3,801	2,163	5,942	3,376	13,147	6,976
Service worker	69.2	66.6	64.2	9.0	8.8	10.0	9.8	11.1	10.9	2,851	1,038	4,440	1,986	9,173	4,366
Laborer	3.6	9.5	14.9	7.7	8.8	9.0	10.0	10.5	10.8	2,649	1,865	4,343	2,692	9,468	5,821
Farm laborer	16.9	15.2	19.4	6.8	7.5	8.0	8.7	9.7	10.5	1,464	640	2,890	1,580	7,075	4,106
Total	31.9	37.5	41.3	9.8	10.6	10.8	11.3	12.0	12.2	4,166	2,087	6,863	3,403	14,705	7,017

Source: 1960, 1970, and 1980 PUMS files.

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earnings of professional women had deteriorated to 48 percent of what professional men received. In metro areas, a similar pattern obtained, with the female/male earnings ratio falling from 52 to 49 percent, much less than in nonmetro areas. On balance, these data emphasize the need to examine the dimensions of socioeconomic inequality within metro and nonmetro labor markets. These data suggest that the effects on earning of gender and industrial change may depend on residence.

Because of its unique importance for rural labor markets, the agricultural industry provides an excellent opportunity to examine in greater depth the intraindustry socioeconomic inequities between men and women. This discussion illustrates the structural complexities that produce aggregate socioeconomic inequities, such as those shown in table 6, and emphasizes the need for studies which relate structural change to individual socioeconomic rewards. 20/ Given the historically important role of immigrant labor in U.S. agriculture, I believe that comparisons between native and foreign-born workers would prove similarly instructive.

Table 7 shows that, as the agricultural industry contracted, it became more specialized and occupationally differentiated. Between 1960 and 1980, when total agricultural employment declined from 7 to under 4 percent, the share of the industry comprised of farmers declined from 57 to 43 percent. At the same time, farm laborer jobs fell slightly, from 33 to 31 percent. Also the size of the professional, semiprofessional, and managerial work force within the agricultural industry almost quadrupled, rising from 1.8 to 6.8 percent.

Concurrently, most occupations within the agricultural industry became more feminized. Whereas women constituted 5 percent of all farmers in 1970, their presence in this occupation had doubled by 1980. The percentage of farm laborers (a relatively low-skill occupation) who are female also rose from 15 to 23 percent between 1970 and 1980. Overall, women's share of employment in the agricultural industry increased from 22 percent in 1970 to 28 percent in 1980. This proportion was lower than the 34 percent female in the total work force in 1980 (Tienda and Ortiz, 1985).

Not only are men and women differentially allocated among occupations within the agricultural industry, but an inspection of their educational attainments shows considerable diversity by occupation with women exhibiting higher schooling levels than men in the lower prestige occupations of farmer, laborer, and farm laborer. Note, for example, that women's average earnings were consistently below those of men in every occupation, including those where the education gap was quite small, such as clerical and managerial jobs, and where women had the average schooling advantage, such as semiprofessional jobs. The data do not reveal the sources of these inequities, but intraindustry occupational segregation probably plays a large part in reproducing gender inequities within agriculture as well as other industries. This is an issue worthy of further investigation since the decline of traditionally male-dominated farm jobs provides an

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20/ This section draws from a comment I prepared in response to Huffman's (1985) paper, "On Human Capital for Agriculture."

Table 7—Selected characteristics of the agriculture industry by occupation, 1960-80

Occupation	Allocation of total agriculture labor force			Percent female		Education		Mean earnings	
						Men	Women	Men	Women
	1960	1970	1980	1970	1980	1970	1980	1980	1980
Professional	1.2	2.3	3.5	8.3	18.6	15.2	14.4	12,858	7,218
Semiprofessional	.1	.5	.9	16.4	39.8	12.7	13.1	9,448	5,422
Farmers	57.4	50.1	43.8	5.1	9.8	11.8	12.4	2,888	1,106
Managers	.5	.9	2.4	11.6	19.6	13.0	13.1	14,409	7,064
Clerical	.7	1.9	3.2	80.0	87.4	13.0	12.6	10,532	5,561
Sales	.2	.5	.6	32.2	31.0	13.0	11.8	12,323	3,836
Crafts	.7	1.8	1.2	5.0	3.9	10.4	10.7	10,006	4,371
Operatives	2.5	2.1	2.6	17.1	20.8	9.9	9.6	9,195	4,939
Service	.3	.6	.9	38.9	31.1	11.0	10.3	8,328	3,687
Laborers	2.9	6.9	10.1	9.8	17.5	10.5	11.9	5,637	3,176
Farm laborers	33.4	32.4	30.7	14.7	22.9	9.4	10.0	6,286	3,066
Total	99.9	100.0	99.9	21.8	27.5	11.8	11.8	5,208	3,365

Source: 1960, 1970 and 1980 Public Use Microdata Samples of the Census of Population and Housing, U. S. Department of Commerce.

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opportunity to degender occupational roles within the industry. Along these lines, we should challenge ourselves to inquire about the kinds of policy interventions that might help prevent the sex-typing of new occupational roles. It is unclear whether comparable worth policy initiatives will equalize pay differences between men and women in occupations that are already sex-typed (Huffman and Orazem, 1984), but a focused consideration of training requirements generated by new technologies might continue to enhance agricultural productivity while preventing inefficiencies and inequities in agricultural incomes (see review in Huffman, 1985).

That differentials in occupational placement and educational requirements of men and women became translated into earnings disparities by gender suggests that we need not only ask how much education and what kind of education is needed for a more productive and efficient agriculture, but also who benefits from such investments. However, unless researchers are able to disentangle the influence of individual and structural factors that constitute socioeconomic inequality, policies designed to reduce inequality will continue to fall short of closing income gaps between metro and nonmetro workers and, within areas, among demographic groups.

To be sure, some of the earnings advantages of men over women, and of metro residents over nonmetro residents, can be explained by differences in education, but a human capital investment strategy probably would not go very far toward reducing residence and/or gender differences in earnings. Note that despite the convergence of men's and women's educational attainment both in metro and nonmetro areas, their average earnings disparities have remained virtually unchanged. Understanding the sources of these persisting earnings inequities requires that we examine in more depth the structural variation in earnings and education between men and women and between metro and nonmetro areas.

My case is that a clearer understanding of social equity issues in the sphere of employment requires knowledge about how the industrial restructuring processes alter earnings and employment frontiers. Policies designed to raise incomes of nonmetro workers must be cognizant both of the industrial restructuring of specific labor markets, and of the skill requirements of a more specialized division of labor at the market, industry, and firm level. A discussion of equity and efficiency issues should be sensitive to the process of occupational restructuring that has gained momentum and then slowed over the course of the past two to three decades. If we do not fully understand the benefits of this process when occupational upgrading was the pervasive feature of this process, then we certainly will not be prepared to mitigate any equity-eroding outcomes that may emerge, such as those between men and women.

The theoretical importance of linking shifts in the relative size of jobs to income and human capital differentials among demographic subgroups can be interpreted in the context of changes in supply and demand for labor. Labor demand theory predicts a positive influence on earnings of rapidly growing jobs, and a negative effect on earnings of declining jobs, but does not explain adequately why large and significant earnings differences persist among comparably skilled workers who differ in one or more characteristics, such as gender, nativity, race, or residence. A sharp increase in the supply of workers willing and able to enter the labor market, as may occur through increased female labor force participation and high unemployment stemming from the shutdown or reorganization of firms, could exert downward pressure on wage payments of all workers. Whether such impacts are uniform between metro and nonmetro labor markets and among various demographic groups poses a challenging set of empirical questions that promise new insights into the determinants of socioeconomic inequality in the United States.

That high-skill jobs became more prevalent relative to low skill jobs, as revealed by the trend in occupational upgrading, suggests that the industrial restructuring processes may favor the better educated. Theoretically, the proliferation of a myriad of new jobs as a result of technological change holds potential to reduce inequities between metro and nonmetro labor markets and among workers of differing skill levels. However, if productivity is evaluated differently among comparably skilled workers who differ in residential and demographic characteristics, or if the investment in human capital by potential workers in nonmetro areas outpaces the process of occupational upgrading, which generates the demand for more highly skilled workers, a disequilibrium in the supply of and demand for workers of varying skill levels could result. This could lead to inefficiencies through the underutilization of labor by skill level, earnings, hours of work, or all of the above (Sullivan, 1978).

In the following section, I elaborate a methodology that shows some promise for linking changes resulting from the structural transformation of employment to earnings inequality among various segments of labor.

Industrial Restructuring and Earnings Inequality, Toward a Multi-Level Methodology

That the industrial and occupational structures in metro and nonmetro areas converged over the past 20 years provides the conditions for greater earnings equity between the metro and nonmetro workforces, but it does not guarantee this outcome. To recapitulate, despite the greater earnings parity between metro and nonmetro workers, gender differences in earnings either were left unaltered or increased since 1960. In nonmetro areas the gender gap in earnings worsened slightly, while that in metro areas remained fairly stable.

Presumably, the pattern of earnings inequality between metro and nonmetro areas and between men and women or other demographic groups, can be partly traced to shifts in the relative prevalence of jobs (demand factors) and to the availability of workers to fill them (supply factors). Unfortunately, most studies of earnings attainment, particularly analyses conducted within the human capital and status attainment approaches, emphasize individual productivity characteristics and neglect the influence of job and/or labor market characteristics in structuring workers' economic rewards. 21/ The main advantage of such a multilevel specification is that it promises insights into the structural factors that constrain individual job choice and, consequently, earnings. In this instance, structural factors refer to the array of job opportunities that are modified through the industrial transformation of employment.

The shift-share analysis presented in the previous section outlined in broad descriptive terms the mechanisms responsible for occupational change between metro and nonmetro areas but did not specifically indicate the industrial location of occupational change. This exercise, which simply requires a more detailed examination of the results of the shift-share analysis, can help in identifying the dominant industries involved in the growth and decline of specific occupations. As such, a more detailed specification of the industrial location of occupational change may serve a practical function in identifying labor markets whose industrial restructuring processes are notably divergent from the national trend and in anticipating economic stagnation in areas where declining industries predominate.

Further analysis is required to link the process of occupational change to the extent of earnings inequality across labor markets and among various social groups. One way to relate structural change in employment opportunities to intergroup earnings dispersion involves associating indexes of net employment changes in specific jobs with their average earnings level at the close of a period under consideration. The components of change in employment summarized eleven occupations that can be further decomposed for an array of 335 job cells (37 industries by 11 occupations). 22/ The industry and occupational mix effects that produced the net growth or decline of

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21/ This statement is an exaggeration to some extent. Many recent studies have introduced characteristics of labor markets such as unemployment rates, racial and ethnic composition of workers, and average wage rates in individual earnings functions. However, in most instances, these supraindividual characteristics are treated as controls, and not as variables of substantive interest in themselves. While the labor market segmentation perspectives of earnings determination have explicitly emphasized the importance of market characteristics in structuring economic rewards, these approaches have not considered how the economic restructuring processes alter income frontiers for individual workers or groups of workers engaged in the same or different jobs. Despite the rich sociological tradition of structural versus circulation mobility in accounting for intergenerational and intragenerational occupational exchanges (Featherman and Hauser, 1978), few studies directly have examined the implications of structural mobility for earnings differentiation.

22/ Matrices used to compute the shift-share analyses involved 407 job cells. However, because two occupational categories, farmers and farm laborers, are found only in the agricultural industry, 72 of the 407 cells were structurally impossible and contained no observations. The exact number of job cells used to depict industrial shifts and intraindustry occupational change depends on the refinement of the classification scheme used, but structural zeros are likely to be found for highly specialized occupations and industries.

major occupational groups can be expressed for metro and nonmetro areas as follows:

Industry Shift

$$IS_{ijkt_{2-1}} = \frac{n_{ijkt_2} - \hat{n}_{ijkt_2}}{n_{ijkt_1}}$$

Occupation Mix

$$OM_{ijkt_{2-1}} = \frac{n_{ijkt_2} - \hat{\hat{n}}_{ijkt_2}}{n_{ijkt_1}}$$

where, i = detailed industry (1 . . . 37)

I = industry marginal

j = broad occupation (1 . . . 11)

J = occupational category marginal

k = metro/nonmetro labor market

N = size of labor force

t = time

$$\hat{n} = \frac{n_{ijkt_1}}{n_{Ikt_1}} \left(n_{Ikt_2}\right)$$

$$\hat{\hat{n}} = \left(\frac{n_{ijkt_2}}{n_{Ikt_2}}\right) \left[\frac{\left(n_{Ikt_1}\right)\left(N_{IJKt_2}\right)}{N_{IJkt_1}}\right]$$

These measures are quite simple computations. The formulation of both shift measures involves subtraction of an expected cell size, say $\hat{n}_{ijkt_2}$, from the observed cell size n_{ijkt_2}, under differing assumptions about how labor force growth and structural reallocation manifested themselves in the employment structure of metro and nonmetro areas. The expected cell size holds the key to interpreting these changes. The industrial shift index assumes that the intraindustry occupational structure was invariant over time. The actual industry shift is derived by subtracting the expected count under the assumption of no intraindustry occupational recomposition. Likewise, the occupation-mix effect is computed by subtracting from the most recent actual cell counts, an expected cell count, $\hat{\hat{n}}_{ijkt_2}$, derived under the assumption of a constant industry structure over time.

These two indices of structural change enable us to evaluate the relative influence of industrial transformation and occupational recomposition on the extent of earnings inequality between metro and nonmetro labor markets, as well as among various labor segments within them. That is, to examine whether the industrial restructuring afforded workers in metro and nonmetro areas equal opportunities, one could estimate a function of the form:

$$\overline{Y}_{ijkt_2} = \alpha IS_{ijk} + \beta OM_{ijk} + \gamma Z_{ijk} + \varepsilon_{ij} \qquad (1)$$

where $\overline{Y}_{ijkt_2}$ = average earnings of workers engaged in the $job_{ij,}$ in market K, at time 2

IS = net change in the size of job_{ij} due to industrial shift

OM = net change in the size of job_{ij} due to intraindustry occupational mix

Z = vector of controls systematicaly related to earnings differentiation, including:

- average education
- percent minority
- percent female

By extension, this logic could be extended to a multilevel model that uses individuals rather than job cells as units of observation, and that regresses individual earnings on their productivity characteristics and the structural change indices corresponding to their jobs at the end of the period in question. Such a specification would take the form:

$$Y_{klmt_2} = \alpha IS_{ijkm} + \beta OM_{ijkm} + \gamma Z_{ijklm} + \varepsilon \qquad (2)$$

where Y_{klm} = the earnings of the lth individual of sex m, residing in the kth labor market area and engaged in job ij. The vector of productivity characteristics in this instance is based on individuals rather than average characteristics of jobs.

Estimating separate earnings functions for metro and nonmetro labor markets and for men and women in each area, serves to hold residence and sex constant and generates purer effects of the two structural change mechanisms of interest. Since the gross interdecade change in earnings was positive and the net change in employment was toward occupational upgrading, the parameters should be positive for both metro and nonmetro areas. 23/ However, the magnitudes are likely to vary significantly between metro and nonmetro labor markets, as well as by sex since our descriptive analysis indicated that the mechanisms producing occupational change differed between metro and nonmetro areas and between the sexes. However, the multilevel methodology is quite flexible in that it encourages the examination of interaction effects among several variables, including gender, residence, and education.

Evidence of significant metro/nonmetro differences in the influence of the two components of structural change on earnings, industrial shifts and changing occupational composition, could provide an empirical basis for designing intervention strategies to alter employment conditions in rural labor markets. That is, with information about which industries dominated the interdecade occupational upgrading in metro and nonmetro areas, coupled with evidence that the earnings rewards associated with industrial restructuring differed across labor markets, researchers can help identify key sources of income differentiation between rural and urban areas. Should the empirical results from estimating equation (1) or (2) show that the relative impact on earnings of the industrial restructuring processes are uniform between metro and nonmetro areas, then policy strategies aimed to reduce residential earnings inequities through industrialization or "tertiarization" of rural economies will meet with limited success. Such evidence would suggest that the sources of rural-urban earnings inequality are deeply rooted in historical and institutional factors, as well as market factors, which price comparably skilled labor differently in metro and nonmetro areas.

Although suggestive as a methodology for relating industrial restructuring to earnings discrepancies between metro and nonmetro areas and between men and women, the proposed approach also is appealing because of its flexibility for examining intramarket earnings inequities. As metro and nonmetro industrial and occupation structures converge over time, it is fitting to focus on the intramarket inequities among various labor groups, such as men and women; people of color; the young and the old; and the skilled and the unskilled. In short, the possible range of questions to be addressed within this framework is potentially quite broad, but the decision about whether to pursue this line of research also hinges on possibilities of resolving data problems and the thornier conceptual task of differentiating nonmetro labor markets.

23/ Our previous exploratory work which regressed earnings on interdecade measures of industrial restructuring generated positive effects.

Conclusion

In discussing issues of equity in nonmetropolitan labor markets, I have emphasized the socioeconomic significance of industrial restructuring as a process which extensively modifies the nature and organization of work, the skill requirements of the workforce, and the economic rewards from labor force participation. That the shift from goods to service production unfolded unevenly in rural and urban areas is less disturbing than suggestions that the benefits from industrial restructuring differ not only between metro and nonmetro labor markets but also among various population groups within markets.

Although I have not empirically demonstrated whether and how the industrial restructuring processes influence earnings differentiation between and within metro and nonmetro labor markets, I have tried to build a case for examining issues of equity in these terms. The analysis of earnings and occupational differentiation across markets and among population groups is one obvious way to approach issues of socioeconomic inequality. It is, however, equally important to investigate other less visible aspects of industrial restructuring as a stratifying process. Differences in the nature and pace of industrial transformation directly affect the ability of families to cope with the decline of employment opportunities, as in cases which involve plant closings. My approach is limited in its ability to portray short-term responses to dramatic changes in employment. These intrahousehold adjustments to employment conditions and job opportunities may include changes in the spread of work among family members, long spells of unemployment, and net losses in economic well-being over the life course. Whether nonmetro residents disproportionately shoulder these less easily measured costs of industrial restructuring is an empirical question that must also find its way on research and policy agendas designed to promote social and economic equity between metro and nonmetro areas.

To close let me suggest a research agenda that will complement and enhance the fruitfulness of the ideas and methods proposed earlier. Topping the list is the challenging task of delineating, in both theoretical and operational terms, nonmetropolitan labor markets. 24/ Although there currently exist no official criteria for grouping rural and nonmetropolitan counties into "labor markets," innovative uses of existing data containing geographic detail provides a basis for disaggregating highly diverse nonmetropolitan areas. These initiatives will feed into existing research based on comparisons of metro and nonmetro areas. State level differentiation of nonmetro areas would be a first step toward this goal. Regional county groupings depicting the territorial division of labor according to commodity specialization is an alternative to the use of State and sub-state political boundaries for delineating nonmetro labor markets. The prime importance of differentiating nonmetro labor markets is that it acknowledges extensive heterogeneity in production structures, which is essential to understand unequal labor market outcomes.

24/ The National Academy of Sciences Panel on Statistics for Rural Development suggested a concept analogous to SMSAs.

Another research priority involves relating the industrial transformation of employment to various labor market outcomes within and between metro and nonmetro labor markets. Such endeavors should also analyze class of worker as a dimension of restructuring in addition to the conventional industry and occupational concerns. Class of worker is important because it will permit a better understanding of changes in unpaid family labor and self-employment and their role in altering the structure of economic rewards in nonmetro areas. To wit, the decline of farmer versus farm laborer jobs have very different consequences on the class structure and, presumably, on the dispersion of earnings in nonmetro areas.

A third fertile research area involves methodological innovation and elaboration. I have argued for research relating industrial restructuring to socioeconomic inequality, but the techniques to accomplish this are not well developed. The aggregate shift-share analysis is mainly an accounting exercise. While informative, its results are more descriptive than explanatory. Linking indices of industrial shifts and changed occupational mixes to earnings differentiation is a step toward explanation, but my proposed methodology does not tell precisely which jobs, defined by industries and occupations, produce the observed effects nor does it indicate whether the same jobs are involved in metro and nonmetro labor markets. Answers to these questions require several types of studies to complement the macro and multilevel approaches to industrial restructuring.

Accordingly, to fully use the information generated from the shift-share analysis, future researchers should strive not only for a finer differentiation of nonmetro areas but also to identify the industrial location of occupational change (see, for example, Singelmann and Tienda, 1985). By identifying patterns of occupational change within broad industry sectors and relating these to other features of jobs such as nonpecuniary benefits, firm profitability, and various aspects of working conditions, it may be possible to determine the structural basis for lower earnings in nonmetro than in metro areas and for women than men. Firm-level studies provide depth perception into how the division of labor is altered within industries and should clarify the consequences of changes in the organization of work for men, women, and other social and demographic groups. Finally, local or regional studies can further our understanding of the process of industrial restructuring and its differential consequences for metro and nonmetro areas by providing a level of analysis intermediate to that afforded by firm-level studies and national studies, which compare metro and nonmetro areas as undifferentiated aggregates. Let me emphasize that these studies are needed in addition to, rather than instead of, research designed to improve our ability to empirically estimate the influence of industrial restructuring on earnings differentiation.

Additional research is also needed to identify which groups benefit most and which lose most from industrial restructuring. Our comparisons of men and women served to illustrate the importance of demographic variations of earnings. Equally important to consider in future research are the differences among the young and old versus prime-aged individuals, of racial and ethnic groups and of foreign versus native-born workers. The importance of this line of research cannot be overstressed. Descriptive tabulations herein suggest that gender differences in earnings and occupational placement are more salient than those by place of residence, and it is likely that similarly large earnings differentials will be found for other groups. Nevertheless, the fact that earnings differentials between nonmetro and metro areas persist, despite a gradual convergence of industrial structures, poses a challenge to those concerned with multiple determinants of earnings inequality. An important part of this challenge entails specifying in theoretical terms why residence should matter. Research questions about who gains and who loses from restructuring should consider residence, but its influence is likely to be secondary to age, gender, and racial dimensions of social stratification.

Finally, analysts conducting intertemporal analysis of structural changes in employment should acknowledge the problems of intertemporal noncomparability of industry and occupation categories. We should take as problematic, not as given, the sensitivity of job categories to capture the nuances of technological change on the nature of work. While it is convenient to work with existing categories, most labor market specialists would agree that the occupational classification used in 1960 does not adequately represent the 1980 job structure. A dramatically changed occupational classification scheme, such as that undertaken for the 1980 census, is only symptomatic of the underlying problem.

The greatest challenge of all, perhaps, is to translate research results into solid policy recommendations. In this domain there is much yet to do.

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DISCUSSION

James Schaub [1]

We have heard two papers on efficiency and equity issues for rural labor markets research. Professor Tweeten's paper emphasized two things: data needs--particularly relating to underemployment, and the performance of labor market interventions. Professor Tienda's paper focussed on the industrial and occupational transformation of the United States over the past three decades and the equity implications for men and women in metro and nonmetro places. She has suggested a methodology for isolating and measuring industry and occupation effects and testing their significance. My discussion of these papers will focus on how an efficient market services employers and employees, equity performance expected of labor markets, and data needs.

Efficiency

Let me begin my discussion of these papers by remarking that I was struck by the attention that both authors gave to the topic of underemployment. We can better understand labor market performance if our assessment criterion specifies that underemployment be minimized rather than unemployment. However, underemployment is more difficult to measure and analyze.

The importance Professor Tweeten attaches to underemployment is clear. He opens the second paragraph of his paper with the statement, "Principal economic problems of rural areas are poverty and underemployment." His discussion of data needs begins with underemployment and goes on for six pages. And, he tells us "... the time has come for the Agriculture and Rural Economics Division (ARED) to assume leadership in estimating various measures of underemployment and testing their suitability to meet real needs."

Tweeten makes a valuable statement about efficiency when he says, "Participants in labor markets measure efficiency in different ways." In other words, potential workers view an efficiently functioning market differently than potential employers do. An important question is: How should the conflicting standards of job seekers and worker seekers be balanced in research and policy analysis?

When considering labor market efficiency, it is reasonable to ask just what the labor market is expected to do. Labor markets should match workers, jobs, and employers. How should we measure efficient performance? There is a gap between our theoretical concept of efficiency and data that measure efficiency.

Neoclassical economic theory sets forth as the first-order condition for efficiency the condition that marginal costs of additional search equal marginal returns. A more elaborate model of the labor market would introduce risk and uncertainty into the efficiency criteria. The multidimensional character of jobs and the unknown productivity of workers suggest that workers and employers are dealing with expected values of costs and returns. In assessing the efficiency performance of labor markets, how much inefficiency is actually risk aversion? Efficient labor markets should do more than provide a job to those wanting to work and more than provide a worker to an employer. There are allocative efficiencies. Workers should be doing the right work and employers should hire the right workers. We recognize failure to accomplish this efficiency when we talk about underemployment or subemployment. Agricultural economists describe allocative efficiency when a farmer makes optimal decisions about what to produce in a world of changing technology and prices. Workers and employers can pursue this efficiency also. We know from agriculture that education and extension improve allocative efficiency by making farm operators better decisionmakers. Is the public employment service the labor market analogy for extension?

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Professor Tweeten lists some attributes of efficient markets.

1. Efficient markets display freedom from artificial restraints such as race and sex biases.
2. Market failure, where social and private margin costs (returns) diverge, can be corrected by public intervention for a net social gain in efficient markets.
3. Industry and labor freely, but not costlessly, move seeking the highest return in efficient markets.

Are we more likely to observe deviations from these three efficiency attributes in rural labor markets or in urban labor markets? Which attributes associated with rural areas affect rural labor markets efficiency? I have tried to answer these questions, using Tweeten's list of differences between rural and urban counties.

Rural population dispersion and rural industrial mix have important implications for rural labor market efficiency. Sparse population leads to higher costs of public service delivery (including work force programs as Tweeten tells us) because economies of scale cannot be exploited. Dispersion of people and employment sites also restricts the gains from economies of scale in search and leads to a steeper marginal cost curve and ultimately, it might be argued, to a higher incidence of discouraged workers. This is consistent with the observation of lower labor force participation rates in nonmetro places and a relatively high rate of discouraged workers as measured in Current Population Survey data. Furthermore, information systems may be less developed in low-density places.

The industrial and occupational structure of rural economies can also affect the efficiency of labor markets. First, the seasonality of employment associated with agricultural and recreation industries results in at least some underemployment; a situation, from the worker's perspective, of inefficiency. Second, the smaller work force will be less diversified and employers may have difficulty hiring people for certain occupations not usually employed within the rural industry mix. Whether industries more prevalent in rural areas are more likely to engage in discrimination remains an empirical question. Is there discernible monopsonist power, akin to the "company town" sterotype present in rural markets?

Equity

Equity concerns distribution. The basic equity question is: Does the social and economic system function according to established rules for distribution of resources, jobs, and rewards? The labor market is part of a larger system and is not solely responsible for the system's equity. However, within the context of a competitively operating labor market there are equity propositions. First, employment is by a competitive process of bids and offers. Second, rewards are distributed according to contribution; the wages and benefits workers receive approximate the value of their marginal product. The unique talents of individuals introduces some monopoly power into the system.

The labor market is not the guarantor of adequate income for all. The minimum wage law does not assure equity. Some people cannot work or are of such low productivity that they are not hired. The socioeconomic system must rely on alternative mechanisms for maintaining the well-being of these people.

Perhaps society ought to strive for equity of opportunity or equity of access in the system that determines distribution. This seems to be the norm we accept as appropriate in the United States. We speak of equal opportunity employment and equal opportunity housing. Economies that pursue equity (or, in the extreme, equality) of outcome sacrifice efficiency by removing the market-oriented incentive system. Tweeten is quick to point out this conflict in his discussion of Equity-Efficiency Tradeoff and Compromise.

Are there characteristics of rural areas that affect the equity performance of rural labor markets? Are the lower per-capita incomes and higher poverty and dependency rates in rural counties the results of labor market equity failures? Is it labor market equity failure that creates a "cycle of poverty"? The dispersion of population in rural areas may lead to inequity in public employment services and education systems compared with metro areas. Are rural citizens entitled to the same services despite higher costs related to population dispersion? If the answer is yes, then a system of service delivery based on "equal outlay" is much different than a system of "equal outcome" or "equal marginal returns" or "according to need."

Industry mix is important, and this is something Professor Tienda emphasized. Equity effects may arise from the interaction between industry mix and government programs. To the extent that public policy is biased toward certain industries, there can be equity effects through the labor market. This can happen through protectionist tariff policies that preserve employment in some industries but raise product prices to consumers, or as existed in the past, a different minimum wage in agriculture. The industry mix effect Tweeten and others have pointed to is the bias from using the unemployment rate in Federal funds allocation formulas when rural economies have higher incidence of self-employment, which tends to bias the unemployment rate downward.

Professor Tienda has pointed to the industrial and occupational restructuring that occurred in the United States in recent decades as important processes affecting labor market equity outcomes. In her paper, Professor Tienda traced these transformations for metro and nonmetro areas using Public Use Micro Sample data for 1960, 1970, and 1980. She showed that metro and nonmetro places did not undergo the same restructuring, and she argued that there are important efficiency and equity implications. She emphasized the equity side.

Her empirical examples considered male/female and metro/nonmetro earnings inequality. A methodology has been proposed for separating industrial change effects and occupational change effects and testing hypotheses about the significance of these effects. Tienda's framework is general; it can be used to consider equity between race/ethnic groups, people in different places, or other groups of interest.

Tienda points out, and I agree, that we do not know enough about how restructuring of industry and occupations operates to change earnings inequality. The exact mechanism through which restructuring produces, maintains, or erodes earnings inequality is not understood. Policies designed to alter the distribution of earnings cannot be formulated properly until more is known about the relationship between restructuring and earnings.

Efficiency and Equity Tradeoff

Tweeten observes that nations cannot singularly pursue either equity or efficiency in national labor policy and points out that tradeoffs occur. The balance between a nation's efficiency and equity goals is not simply an economic decision; it is also a social and political decision. The theory of efficiency and equity tradeoffs is not well developed, and empirical analyses are virtually nonexistent. Furthermore, data for measuring labor market performance, presumably measuring various dimensions of efficiency and equity, are needed.

Data Needs

Tweeten emphasizes that underemployment is a principal problem in rural areas and states, "Unemployment statistics imperfectly measure economic hardship and labor market performance." Tweeten's charge that ARED "assume leadership in estimating various measures of underemployment and testing their suitability to meet real needs" is well taken. This is something the Economic Research Service (ERS) can do for some of the underemployment measures economists and sociologists have suggested. Other conceptualizations of underemployment will require improved data collection and reporting before we can report on a reasonably current basis even national data for nonmetro population groups. Subnational measures will be more difficult but perhaps more valuable to our clients. Now, we must rely on the decennial census and special surveys for measuring local underemployment.

The other data needs Tweeten identifies would certainly appear on any rural researcher's wish list of data. Better income and wealth data (but not just for the poor and farm people), cost of living indices for rural areas, and a data system along the lines of Standard Rural Statistical Areas would not only enable ARED to do its job better but might also attract more researchers into rural studies who have ignored the field because of frustrations with data availaility.

Another specific recommendation Tweeten makes is "ARED has capabilities not only to analyze regularly reported statistics but also to keep abreast of work force policy performance, particularly as it relates to rural areas. A principal reason for doing so is because no other agency is doing so." I have two remarks on this. When I first joined ERS, what is now called the Rural Labor Markets Section, was Manpower Studies. The new name is perhaps broader in scope and sex neutral but may reflect a shift away from work force research that should be rethought. ERS needs to include studies of work force and employment policies in its program of rural labor research. The current circumstances in agriculture, the "farm crisis," has generated more interest in the adequacy of employment programs to serve displaced farm operators, their families, and the nonfarm population. Thus, our research program should be flexible enough to include current topics.

Tweeten's final recommendation is to pursue basic parameters such as the supply and demand for labor including estimates of supply and demand elasticities. Supply and demand analysis is a useful analytical engine already used by ERS to analyze policy alternatives for commodity markets. ERS's clients could well benefit from more rigorous empirical modeling of rural labor markets. Tienda has emphasized the longrun; her approach is not appropriate for analysis of shortrun labor market performance. This longer run perspective is often lacking in public policy debates that focus on short-term remedies for labor market problems, even though there are longrun structural bases for these problems. The time series analysis Tienda suggests will encounter all the problems inherent in time-series work, but perhaps the most serious will be the noncomparability of industry and occupation categories over time. This introduces the problem of separating real structural changes from definitionally created changes.

Tienda suggests a research agenda that includes "... the challenging task of delineating in both theoretical and operational terms nonmetropolitan labor markets." ERS and others have begun work on this. Your ideas on how to delineate labor markets will be most welcome.

II. Market Performance — Stability, Adaptability, and Growth

STABILITY, GROWTH, AND ADAPTABILITY TO ECONOMIC AND SOCIAL CHANGE IN RURAL LABOR MARKETS

Steven R. Kale [1]

Polls of residential preferences have long indicated a widespread desire to live in small towns and rural or semirural settings. These preferences have stemmed, in part, from the view that residents of less densely settled areas enjoy a quality of life comparatively free of crime, congestion, and other problems perceived to characterize large cities. The pull of recreational, scenic, and other amenities also has contributed to the attractiveness of some rural areas.

Until the 20th century, a majority of Americans, out of both necessity and preference, lived in rural areas. During the first half of the 20th century, however, technological advances in agricultural production, improvements in transportation, and other factors led to a shrinkage in the number of jobs available in outlying areas. Rural out-migration increased dramatically, and the Nation's cities experienced rapid expansion.

The pattern of urban growth and rural decline changed notably in the late sixties and early seventies. Overall rural out-migration slowed, and in some nonmetropolitan areas (herein used interchangeably with rural areas), considerable growth occurred. Many of these gains were attributed to increased demands for labor by manufacturers and other existing or in-migrating rural employers. Additional demand for labor, in turn, contributed to a reduction in the exodus of residents from farming areas and to greater in-migration by new or former residents.

This pattern appears to have changed in the early eighties, continuing a trend begun in the late seventies. Recent data indicate that the recession of the early eighties affected nonmetropolitan areas more severely than metropolitan areas, and since the recession's 1982 peak, nonmetropolitan areas have recovered more slowly than metropolitan areas. Nonmetropolitan growth and decline in employment also have varied geographically. In the recession of the early eighties, for example, some areas experienced substantial losses of employment, while others continued to grow. Although there are not enough available data to enable comparisons of trends after 1982, it is likely that employment growth has been geographically uneven among nonmetropolitan areas and that some areas have yet to experience the recovery.

Trends of the last 25 years thus indicate that rural labor markets vary considerably in their stability, adaptability, and growth, and the understanding of these variations and their causes is extremely important to the identification of policies for dealing with rural problems. Policies to help nonmetropolitan areas cope with rapid growth may be much different than strategies for declining areas trying to adapt to the loss of a major employer. Relatively stable rural labor markets may require still other types of assistance to ensure that stability does not become stagnation.

The purposes of this paper are (1) to identify key issues regarding the growth, decline, stability, and adaptability of rural labor markets, and (2) to suggest topics for additional investigation by analysts concerned with the performance of rural labor markets. To begin addressing these tasks, a summaryis presented of some of the more well-known models of regional economic growth and the location of economic activities. This is followed by a review of findings from several studies analyzing growth and decline of nonmetropolitan America in the last 25 years. Further examination of recent trends supplements conclusions of other writers. Lastly, issues and topics for future research are identified. Throughout the paper the focus is primarily on employment, though unemployment, underemployment, and other indicators such as income also are discussed.

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Review of Conceptual Models

Numerous models for regional economic growth and the location of economic activities have been proposed. While these models have not been developed specifically for nonmetropolitan areas, they nonetheless are useful for conceptualizing reasons for growth, decline, and stability in rural labor markets. Some of the models are deductively derived from a set of assumptions; others empirically describe processes that appear to have been historically important. This section briefly reviews some of the more well- known models and discusses their relevance for nonmetropolitan areas.

Factor Price Equalization Model

This model is one of the more purely theoretical approaches to regional economic growth and decline. Factor price equalization is based upon interregional trade theory and assumes that capital and labor, two primary factors of production, are perfectly mobile and will move to areas where the highest returns are obtained. From these and other assumptions, it can be concluded that workers will migrate from low-wage to high-wage regions and that capital will be transferred in the opposite direction (for example, Isard 1975, p. 172-75). These flows will continue until factor returns are equalized regionally, leading to a convergence of incomes among regions.

This model and its variations have been tested widely in national and international settings. Many researchers have shown that migration of labor does indeed occur in response to differentials in incomes or wages among regions. Nevertheless, despite interregional convergence, differences in incomes and wages have persisted over long periods. Lack of information about employment opportunities, ties to families and communities, institutional barriers, and environmental preferences are a few of the reasons why residents of low-wage areas have not migrated to higher-wage regions. It also has been shown that capital is imperfectly mobile, especially from higher-to lower-wage regions.

Although this model has been proposed for nations and for regions within nations, it also may pertain to nonmetropolitan areas characterized by a large number of persons who are working for low wages or who are unemployed. Residents of the low-wage, nonmetropolitan region would migrate to the higher-wage metropolitan area, eventually leading to more competition for labor and higher wages in the nonmetropolitan region. Likewise, because of lower initial labor costs, capital from the metropolitan region would be invested in the nonmetropolitan area until labor costs there rose too high to make additional investments profitable.

The available evidence indicates that nonmetropolitan-to-metropolitan migration in response to job-related factors was widespread in the United States during the first part of the 20th century (Price and Sikes 1975). In the seventies, this pattern continued for some nonmetropolitan areas but was reversed in others, even where wages were considerably lower than in nearby metropolitan centers. The movement of capital from metropolitan to nonmetropolitan centers has been incomplete and virtually nonexistent for many remote nonmetropolitan areas, but there have been considerable investments in manufacturing in the sixties and seventies (Whiting 1974; Summers and others 1976; Lonsdale and Seyler, 1979). The factor price equalization model has been used recently by Norcliffe (1984) to discuss the relationships between labor and capital in nonmetropolitan industrialization.

Unbalanced Growth Models

Two types of unbalanced growth models have been identified: cumulative causation (Myrdal 1957) and core-periphery (Hirschman 1958). Both models view regional economic change as a process whereby some regions grow while others decline in the earlier periods of development. In the longer term, however, both Myrdal and Hirschman predict a convergence in regional incomes.

Myrdal's cumulative causation model asserts that because of initial advantages in location, transportation, labor, or other factors, growth occurs more rapidly in certain areas than in others. Labor and capital migrate to the dominant areas, resulting in a "backwash effect" in the less developed, peripheral areas. Expansion in the dominant center eventually leads to demands for goods and services produced in the peripheral areas. If these "spread effects" outweigh the backwash effects, the peripheral areas begin to experience economic growth.

Hirschman's model is similar to the cumulative causation model. In the core-periphery model, it is assumed that core centers or growth poles emerge in a region and that, as the centers expand, "polarization" effects similar to Myrdal's backwash effects occur. Over time, these growth centers become sufficiently large that they are unable to supply all their needs and growth "trickles down" to peripheral areas.

Myrdal and Hirschman derived their models to help explain national or regional differences in levels of economic development, and neither specifically applied their models within a metropolitan/nonmetropolitan context. Nonetheless, their models help to explain patterns of nonmetropolitan growth within the "urban fields" of metropolitan areas (Friedmann and Miller 1965; Lamb 1975) and in areas producing coal and other energy resources during the seventies. Moreover, improvements in transportation and communication have facilitated spread effects and the trickle down of economic activities into nonmetropolitan areas. Some parts of nonmetropolitan America, however, have been experiencing backwash and polarization effects for many years, and it is unclear whether they ever will benefit from spread effects or trickle down. Government programs may spur development in these lagging regions, but the fiscal soundness of such programs has been the focus of ongoing debate by regional and national policymakers.

Product Cycle Model

Similar in some ways to the notions of spread effects and trickle down, the product cycle model suggests that when the process for providing goods or services becomes sufficiently routine, production can "filter down" to more peripheral areas where labor or other costs are low (Thompson 1969, pp. 8-9; Norton and Rees 1979; Rees 1979). This model is based upon three stages in a product's life cycle: innovation, growth, and standardization (Vernon 1966;

Hirsch 1967). The first two stages are most likely to occur initially in the core areas, but the third can take place in more peripheral locations.

The product cycle model is sometimes viewed as a vital component to a systems theory of regional development in which "technological innovation is seen as the primary reason for economic growth" (Storper 1981, p. 20), and other factors of production such as labor and capital are considered less important. Innovation-induced growth diffuses through the urban hierarchy, with the more highly skilled jobs, such as those in corporate administration and research and development, occurring at headquarters of companies in large metropolitan areas (for example, Berry 1972). More routine production takes place in branch plants at smaller centers within the hierarchy. Growth throughout the hierarchy, however, is uneven. A few metropolitan centers dominate, and growth and decline in the periphery depends upon the ability of corporations to adapt to ongoing technological change.

Several writers have used the product cycle model to help explain nonmetropolitan industrial growth in the sixties and seventies. Petrulis (1979a), for example, used the model to examine national changes in metropolitan and nonmetropolitan employment in manufacturing. Erickson (1976), Leinbach (1978), Erickson and Leinbach (1979), Cromley and Leinbach (1981), and Park and Wheeler (1983) applied the product cycle model to State-level changes in employment for Georgia, Kentucky, New Mexico, Vermont, and Wisconsin. These State-level studies usually concluded that the availability of trainable labor willing to work for modest wages was a key factor in the filtering down of manufacturing to nonmetropolitan areas.

Development Stages Model

The development stages model, which perhaps became most well known with the publication of Rostow's (1960) The Stages of Economic Growth has been proposed by numerous writers including Colin Clark (1940). According to this approach, longrun structural changes have resulted in increasingly more sophisticated types of economic growth and development. In general, these structural changes have led to shifts from more traditional agricultural or resource-based societies to industrial and postindustrial economies.

Development in most economically advanced societies has been shown to be somewhat consistent with the stages model. Critics of the model, however, argue that rapid economic expansion can occur in countries characterized by the first stages of the model; for example the growth of selected petroleum-based economies in the Middle East during the seventies, and that some of the older industrial regions in Western countries are growing slowly or are declining. The stages model also has been criticized because it is based on weak theoretical foundations and fails to identify the mechanisms linking the stages and leading to growth.

Although Hage (1979) has proposed that the stages model may be helpful in conceptualizing nonmetropolitan growth in a postindustrial society, recent experiences in numerous rural areas suggests that the model should be applied cautiously. Resource-based rural economies in some parts of the Western United States, for example, experienced rapid growth in the seventies, and many nonmetropolitan areas have advanced to a postindustrial stage without having experienced growth in manufacturing. Furthermore, some of the more industrialized rural areas in the Midwest and Northeast are experiencing problems similar to those found in major metropolitan portions of those regions, indicating that communities advancing to the later stages of the model are not inevitably undergoing growth and development.

Export Base Model

Douglass North (1955) was among the earliest economists to argue that the export base model is more appropriate than the development stages model for describing regional economic growth. Proponents of the export base model believe that regional economies develop because of demands for commodities produced in large enough quantities to be exported to consumers outside the region. As demand for the commodities grows, employment and incomes increase in the economic sector (basic) in which these commodities are produced and in other sectors (nonbasic) suppling inputs to the exporting activities. A region's economic livelihood thus is based upon its ability to export and, to some extent, upon the amount of backward linkages from the exporting sector to other sectors in the regional economy. Resource-based activities, such as agriculture, mining, forestry, and fishing, are among the more important exporting activities mentioned by North and others. Additional types of basic activities are manufacturing industries exporting their products, tourism, nonlocal Government, and service activities attracting customers from outside the region.

The export base model has contributed greatly to the understanding of growth and decline in rural labor markets. Much of the growth in nonmetro America depends upon the export of goods or services produced locally or upon the ability to attract income in other ways (for example, through tourism or governmental transfer payments) from outside the region. Declines in many rural areas have resulted from resource depletion, technological changes in the production of goods or services that the region exports, changes in consumer preferences or other reasons policies leading to overall declines in demand for goods or services produced in rural areas, competition from lower cost producers elsewhere, and changes in governmental policies.

Federal, State, and local programs for rural economic development have implicitly or explicitly recognized the importance of the export base model. The intention of many such programs has been to facilitate the expansion of existing basic activities or to encourage the development of new ones. Some of the programs have been designed explicitly to help adjust to declines in demand for goods and services important to a community's economic base.

While the export base model undeniably is useful for understanding rural economic growth and decline, it has a number of weaknessess. One of the more obvious is that it is difficult to identify precisely which of an area's economic activities are basic and which are nonbasic. Location quotients, minimum requirements techniques, input-out analysis, and other techniques have helped to measure basic and nonbasic activities, but they rely on assumptions that limit their utility. Another problem of the export base model is that it assumes that regional growth is dependent largely upon exports. For most rural communities, economic growth probably is very dependent upon the stimulation of export-based activities. However, exports are less important for larger, more diversified cities and regions where the development of backward (import-substitution) and forward linkages also may contribute to economic growth. Perhaps the most serious limitation of the export base model is that it is more descriptive than analytical. The model describes how regions grow, but it does not contribute much to understanding how and why locational decisions about investments and disinvestments are made.

Location Models

Location models are based upon neoclassical economic theory. The main distinguishing feature of location models is their attention to the significance of distance and the costs of overcoming it. In these models, transportation costs are assumed to be the most important factor determining the location of economic activities. Among the more important models are von Thunen's on the location of agricultural production, Christaller's and Losch's central-place or market-demand approach, and Webber's least-cost theory.

The importance of location models for analyzing nonmetro development is undeniable, particularly where the assumptions underlying the models are valid. An obvious example is von Thunen's model, since agricultural production is an important part of the economy in many nonmetro areas. Though developed in Germany during the 19th century, the model is believed to be somewhat relevant for interpreting broader, zonal patterns of 20th century agricultural production in the United States (Muller 1973). Central place theory has been shown to be applicable to rural areas of the Midwest where the assumptions are closest to being valid (for example, Berry 1967a). Least-cost theory is helpful for examining the locational tendencies of economic activities characterized by large amounts of weight or bulk lost during the processing of materials. Many of these types of activities are located in nonmetropolitan areas.

If the assumptions of these models are invalid, and this is often the case, the models have less utility. When the models' assumptions are relaxed to introduce reality, it becomes increasingly difficult to explain the location of economic activities in nonmetropolitan areas or elsewhere (for example, Lloyd and Dicken 1977). Refinements to the models nonetheless continue, and they contribute to an understanding of nonmetropolitan growth or decline in some areas.

Behavioral Models

To partially account for problems in other models of the location of economic activity and regional growth and decline, behavioral models have been developed. Perhaps the greatest concerns of behavioralists are the assumptions of economic rationality and perfect information from models based upon neoclassical economics. To behavioralists (Pred, 1967, p. 24):

> Every locational decision is viewed as occurring under conditions of varying information and ability, ranging, at least theoretically, from null to perfect knowledge of all alternatives, and as being governed by varying abilities (as well as objectives) of the decision-makers.

Hence, growth and decline of regional economies is a consequence of locational decisions made under conditions of uncertainty (Webber 1972).

Decisions resulting in long-run stability or growth represent successful adaptations to new locations. In such cases, businesses have considered adequately the internal and external forces determining a "satisficing" (rather than profit-maximizing) location, although over the longer term these locations need to be within spatial margins to profitability (Smith 1981). Bad decisions, in the absence of "adoption" of businesses by the economic system (Tiebout 1957), often lead to reductions in work forces or to plant closures.

The behavioral model has been helpful for interpreting the process by which companies locate in nonmetro areas. Various behavioral conceptualizations of the decisionmaking process have been presented, and these have contributed to a greater understanding about the reasons why manufacturers and other businesses locate branch plants in nonmetro and other peripheral areas. Numerous case studies, especially when they incorporate a broader industrial-organization perspective, have added further to this awareness. Behavioral models, like several others addressing regional growth or the location of economic activity, are primarily descriptive, and concern has been raised about the likelihood of obtaining meaningful generalizations from such models.

Structuralist Model

During the last 10 years or so, several writers have begun to interpret economic growth and decline from a structuralist perspective (for example, Storper 1981). Supporters of this view usually share a Marxist orientation and are critical of neoclassical and other models that analyze economic change at a micro level. Structuralists believe that the location of economic activities is based upon the ability of entrepreneurs to interpret the historic interplay of broader macro influences.

> The essential argument of structural theory is that industry creates a specific demand for labor-power; this demand changes when, under pressure associated with macroeconomic fluctuations, organizational restructuring and labor process changes are initiated. The resultant changes in the level and character of labor demand lead to changes in investment patterns, including plant closings, relocations, and new plant establishment to take advantage of more appropriate labor supplies. (Storper 1981, p. 27.)

Competitive pressures, according to the structuralist model, have led to a spatial division of labor where the location of production differs from that of nonproduction activities. Production is increasingly occurring where labor costs can be minimized, whereas nonproduction activities tend to be more centralized. The decentralization of branch plants into nonmetro America thus is seen by structuralists as a result of the desire by businesses to maintain or expand profits and thereby to accumulate capital.

On the surface it appears that outcomes from the structuralist model do not differ much from those of the neoclassical growth or product cycle models. However, while the neoclassical models and the structural model have the notion of profit maximization in common, they differ considerably in overall approach, assessments of the effects of economic change, and the notion of spatial equilibrium. The product cycle model differs from the structuralist approach primarily in the interpretation of the roles of technology, capital, and labor. Structuralists consider the product cycle model to be technological determinism (Storper 1981; Sayer 1983). In a capitalist system, technological change is viewed as inevitably leading to regional "losers" as well as "winners" and as substantially contributing "to the very problems that regional theory aims to solve" (Sayer 1983, p. 65).

The structuralist approach also has its critics. Some argue that the top-down Marxist approach of the structuralists has been "heavy handed" (Taylor 1984). Additionally, it has been argued that individual decision-making units, especially large corporations, have some degree of control over the environments in which they operate, that the concepts of the structural model are descriptive rather than theoretical, and that the concepts are not well linked (Taylor and Thrift 1983).

Summary

Conceptual models have some relevance for understanding growth, stability, and decline in rural labor markets, and as Tweeten and Brinkman (1976, p. 75) stated after their review of several models appropriate to "micropolitan" development: "We can learn from each, but no one theory has the sole truth." None of the models satisfactorily accounts for variation in nonmetro growth and decline in all areas, and it may be impossible to derive such a model. Nevertheless, it remains important to attempt to conceptualize the processes responsible for nonmetropolitan development and to test these concepts as rigorously as possible.

Measuring Growth, Decline, and Stability in Rural Labor Markets

Rural labor markets have long been topics of interest to analysts of regional development. In the last few years, however, there has been renewed attention to this focus of research, primarily because of the population turnaround in nonmetropolitan America during the late sixties and early seventies. Numerous studies have monitored these trends and have outlined reasons thought to be responsible for national and regional patterns of growth and decline in rural areas (for example, Beale 1975, 1976, 1977; Morrison and Wheeler 1976; McCarthy and Morrison 1977; and Brown and Wardwell 1980).

Causes for population growth in nonmetropolitan areas since the sixties vary geographically. Some of the increases have been attributed to the extension of metropolitan commuting sheds into adjacent nonmetropolitan areas. Considerable growth also has occurred in nonadjacent areas beyond the urban fields of large and small metropolitan cities. This growth in more remote areas has been associated with numerous factors, among wich are the decentralization of manufacturing, expansion of energy production, in-migration of older Americans, increased enrollments in colleges and universities, recreation and quality-of-life amenities, and government-related activities. The geographic diversity in the importance of these factors for growth and decline in nometropolitan America since 1970 has been summarized well by Brown and Beale in Nonmetropolitan America in Transition (Hawley and Mazie 1981), perhaps the most wide-ranging reference available to date on nonmetropolitan America.

The existing literature suggests that numerous variables can be used to measure growth, decline, and stability of rural labor markets. Changes in population and migration often are used to provide an overall picture, while per capita income, poverty rates, and other quality-of-life indices help provide a better understanding of economic and social well-being. It would seem, however, that measures of employment best capture changes in the supply of and demand for labor. Thus the remainder of this section will address recent trends by focusing on employment and unemployment, though results from several studies using other measures of growth and decline also will be presented. The discussion begins with comments about the principal sources of data for employment and unemployment, which is followed by a review of selected studies covering rural labor markets primarily in the sixties and seventies. Also included will be an assessment of the post-1979 pattern of nonmetropolitan employment and an overview of recent trends in unemployment and underemployment.

Sources of Data

The principal suppliers of information for rural labor markets are the Bureau of the Census, U.S. Department of Labor, and U.S Department of Agriculture. Employment data from the Bureau of the Census and the Department of Labor are available for several economic sectors, while those from the Department of Agriculture are available only for farmworkers. Discussion here will center on the first two major sources; more complete reviews of all three are available elsewhere (for example, Moser 1972; Tweeten 1979; Gilford and others 1981, pp. 129-60).

The Census of Population published by the Bureau of the Census, provides the most comprehensive data available for nonmetropolitan areas. Availability of these data only at 10-year intervals, however, limits their utility. The economic censuses, published every 5 years, also are useful for analyzing nonmetropolitan trends in employment. Annual County Business Patterns are among the best published sources available, although these reports do not cover some of the more important sectors (for example, agriculture and State and Local Governments), and users must aggregate data for counties to derive nonmetropolitan totals. The Current Population Survey another annual report of the Bureau of the Census, is based upon monthly interviews of approximately 70,000 households, and quarterly and annual breakdowns of employment and unemployment by place of residence are available on computer tapes for nonmetropolitan areas.

The Bureau of Economic Analysis (BEA), which is an arm of the Department of Commerce, and the Department of Labor's Bureau of Labor Statistics (BLS) also provide valuable data, the best of which comes from the BLS's ES-202 program. Data from the ES-202 program are used to provide breakdowns of wage and salary employment by sector for the United States, census regions, and States. These data are further disaggregated by metropolitan and nonmetropolitan areas and are available, along with data for proprietors, on microfiche or computer tapes. Similarly categorized data on personal income, including figures at the county level, are available from the BEA.

Disclosure at the nonmetropolitan level is one of the most formidable issues facing users of these sources of data. In many rural areas, economic sectors are characterized by only a few employers. To protect the confidentiality of information about these employers, data for various sectors are not disclosed. Although other sources occasionally can be used to help estimate employment where disclosure occurs, deriving detailed information is often difficult and sometimes impossible.

Because much of the data for nonmetropolitan areas is available only on microfiche or from computer tapes, it is somewhat inaccessible and difficult to use. Investigators may be required to purchase more than is necessary and, as Clubb and Traugott (1979, p. 204) note: "When the costs of overpurchase are added to the reprocessing costs of subsetting and converting data to usable form, the financial and other burdens confronted in utilizing federally collected data can become prohibitive for all but the best funded individual scholar or research group." This problem is especially acute for nonmetropolitan policymakers and analysts who need detailed data to comply with Federal requirements for preparation of grants and to monitor and examine recent trends. Recognition of these and other problems has led to a call for improving "the quality and specificity of information collected and reported on rural areas" (Block, Naylor, and Phillips 1983, p. 2). Efforts to accomplish this, however, would probably be expensive and may be inconsistent with attempts to reduce Federal spending during the eighties.

Growth and Decline of Employment in Rural Labor Markets

Regional growth and decline of employment in the United States has been the topic of considerable research, especially with the decline of population and employment in the Frost Belt and increases in the Sun Belt during the sixties and seventies. Although numerous analysts have discussed changes in employment for specific regions, publications of regional trends across the United States have been somewhat more scarce. One of the most comprehensive earlier studies was by Perloff and others (1960), who used shift-share analysis to examine regional changes in employment from 1939-54. More recent examples include Sternlieb and Hughes (1975), Weinstein and Firestine (1978), Beyers (1979) Pack (1980), Rones (1980), and Greenwood (1981).

Comparisons between metropolitan and nonmetropolitan changes in employment also have been undertaken. Trends in manufacturing have been the focus for some (for example, Petrulis 1979a,b; Estall 1984); nonmanufacturing along with manufacturing has been included in others (Hansen 1973; Haren 1973, 1974; Haren and Holling 1979; Till 1981). These studies found that during the late sixties and early seventies, employment in manufacturing increased more rapidly for nonmetropolitan areas than for metropolitan areas, resulting in an expanding share of manufacturing for nonmetropolitan America. Much of this growth, however, was in slow-growth industries, and after 1973, nonmetropolitan employment grew more rapidly in services than in manufacturing. Approximately 40 percent of total nonmetropolitan employment was in the South, and 30 percent was in the North Central census region, with the remainder about evenly split between the West and Northeast. Increases in nonmetropolitan employment from 1962-1978 were greater for the South and West than for the other two regions, similar to the national trend.

Several recent studies have added significantly to the literature on growth and decline in rural labor markets (Garnick 1983, 1984; Ross, Green, and Hoppe 1984; Daberkow and Bluestone 1984; Bluestone and Daberkow 1985; Kuehn and Bender 1985; Richter 1985). Although only the publications by Bluestone and Daberkow are based solely on employment data, each study contributes to the understanding of contemporary trends.

Garnick, for example, assesses shifting balances in metropolitan and nonmetropolitan population, personal income, and earnings over three time spans: 1959-69, 1969-79, and 1979-81. The data show that during the latest time period, there has been more growth in metropolitan areas than in nonmetropolitan areas. This growth, nonetheless, has not been spatially uniform: "In the more urbanized regions, nonmetropolitan areas continued to grow faster than metropolitan areas; and in the less urbanized regions, metropolitan areas continued to grow faster than nonmetropolitan areas" (Garnick 1984, p. 258). Garnick concludes that nonmetropolitan growth may slow during the eighties for several reasons: (1) energy-related development will not occur as rapidly; (2) peaks may be close for the "catching up" of non- metropolitan areas to metropolitan areas in the proportion of service jobs; (3) wage-rate differentials between metropolitan and nonmetropolitan areas are being reduced; (4) workers in metropolitan areas are becoming more willing to negotiate wage bargains and work rules that are more favorable to maintaining and creating jobs; and (5) community leaders in metropolitan areas are becoming more sensitive to the importance of taxes in the locational decisions of businesses.

A somewhat different approach is taken by Ross, Green, and Hoppe, who use mostly 1979 or 1980 data for income and other variables to classify 2,443 nonmetropolitan counties according to seven types of socio-demographic and economic patterns: agriculture, Federal lands, Government, manufacturing, mining, poverty, and retirement. Their purposes for deriving and analyzing this classification are twofold:

> First, it provides a general framework for translating the social, economic, and demographic diversity exisiting in contemporary rural settings into a small number of meaningful dimensions. Second, the dimensions themselves may be treated as contexts for examining the effects of various kinds of public policies and secular forces on present and future development of rural areas (p. 2).

After using discriminant analysis and t-tests of means to identify important characteristics for each of the seven types of counties, the authors discuss the implications of their findings. Among the more important of these is that while, in the aggregate, nonmetropolitan America is becoming more diversified, and many individual rural areas are still economically specialized or are changing from specialization in one type of economic activity to specialization in another. Policies aimed at diversification thus need to be carefully assessed to determine whether they will accomplish their objectives. Additionally, the authors believe that programs need to be developed to address the specific needs of poverty areas, retirement areas, and areas affected adversely by the shift of nondurable manufacturing to nations with lower costs of production.

Data for income at the county level also are used by Kuehn and Bender to classify nonmetropolitan counties according to specialization in farming, manufacturing, mining, government, and other economic sectors. Location quotients are used to derive dominant or major specialties for each county in 1970 and 1979. Just over half the counties could be classified by dominant economic specialty, with manufacturing accounting for 30 percent and farming 17 percent of the total in 1979. Manufacturing's proportion, however, had increased since 1970, while farming's had decreased. These findings are similar to those of Ross and others namely, That despite efforts to diversify rural economies, many remain tied to one type of economic specialization, and that policies for aiding economic development in nonmetropolitan America should be designed in accordance with the variations among areas.

The possible end of the turnaround in nonmetropolitan growth during the seventies is explored by Richter. To ascertain whether this occurred, he examined annual growth rates in population and migration for 3,097 counties during the sixties and three periods in the seventies: 1970-74, 1974-77, and 1977-80. His results indicate that there was a slowdown in nonmetropolitan growth during the late seventies, but that this took place almost entirely in counties not adjacent to metropolitan areas. Adjacent counties, on the other hand, continued to grow faster than metropolitan areas. He further finds that metropolitan areas with less than 100,000 population had a higher growth rate than either larger metropolitan areas or nonmetropolitan areas during the late seventies.

Richter also categorizes nonmetropolitan counties by percentage employed in agriculture, manufacturing, mining, entertainment and personal services, and the military. Annual net migration rates were considerably lower or more negative in the late seventies than in the earlier part of the decade for counties heavily dependent upon agriculture, manufacturing, and the military; relatively stable for the few counties heavily dependent upon entertainment and personal services; and unchanged for counties heavily dependent upon mining, though this rate was much higher during the midseventies than in both the earlier and later parts of the decade. Richter concludes that some of the reasons for the nonmetropolitan turnaround appear to have been short term, and that the slowdown of growth in the late 1970s "may only corroborate the notion that migration between nonmetro and metro areas is tending towards equilibrium" (p. 262).

Recent and projected trends in nonmetropolitan employment are summarized by Bluestone and Daberkow. In their 1984 report, trends for 1976-79 and 1979-82 are examined; in the 1985 article they categorize trends for a different set of periods: 1969-73 and 1975-82. The authors find that during the late seventies and early eighties, gains in nonmetropolitan employment occurred largely in services, trade, and government, unlike the early seventies when increases were more widespread among sectors. From about 1975-82, overall nonmetropolitan growth lagged behind that of metropolitan areas because of slower growth in the South and West; however, gains in nonmetropolitan employment in these two regions were greater than those in the North Central and Northeast. Slow growth in nonmetropolitan areas in the late seventies and early eighties is attributed to the sharp reduction of growth in the North Central region, which is heavily dependent on manufacturing and agriculture, sectors vulnerable to foreign competition and the cost-price squeeze in farming. The North Central region was particularly hard hit during the recession of the early eighties, with nonmetropolitan employment dropping by 4.2 percent. While this performance was worse than that of other nonmetropolitan regions, it was not as bad as in the metropolitan North Central where employment decreased even more.

Projections of employment to 1990 suggest that nonmetropolitan growth will continue to lag behind metropolitan growth. Private service industries are expected to experience the most growth in nonmetropolitan areas, though these gains will be less than those in metropolitan areas. These projections, combined with analysis of trends in the early eighties, lead the authors to conclude that strategies to reduce regional inequities during periods of cyclical decline or slow growth may be more effective than those addressing metropolitan and nonmetropolitan differences in economic well-being. Moreover, if nonmetropolitan areas are once again entering a slow-growth phase, "rural development policy may have to focus more attention on expanding economic opportunities or on helping rural areas better adjust to slower growth" (Daberkow and Bluestone 1984, p. 16).

A Further Look at Recent Trends in Nonmetropolitan Employment

Investigation of data for nonmetropolitan employment since 1979 yields additional insight about recent trends. Two types of unpublished data are used: (1) employment by place of work, which is available for the Nation, census regions, and States by metropolitan and nonmetropolitan areas; (2) employment by place of residence, which is only available for metropolitan and nonmetropolitan areas nationally. Place-of-work data are available from the Bureau of Economic Analysis; place-of-residence data are from the Current Population Survey. Metropolitan/nonmetropolitan breakdowns by place of work are based on the most current delineation of metropolitan areas, which for the data here is 1982. By place of residence, the breakdowns are based upon the delineation of 1970 metropolitan areas, and annual averages are available through 1984. Nonmetropolitan employment is greater by place of residence than by place of work because data by place of residence in the eighties include figures for areas becoming metropolitan since 1970, and because the number of employees who live in nonmetropolitan areas but work in metropolitan areas is greater than the number working in nonmetropolitan areas and living in metropolitan areas. If trends from both types of data are similar, however, differences in methods of collection and definition become less important.

The nonmetropolitan share of national employment seems to have peaked in the late seventies (table 1). Data by place of work indicate that the nonmetropolitan share was greatest (21.9 percent) in 1976 and has declined steadily since then. By place of residence, the share was greatest in 1978 and has declined through 1984. Highest employment by place of work occurred in 1979. Because of the way data were tabulated, figures for nonmetropolitan employment from the Current Population Survey show continued growth through 1984, though there was a drop in 1982. These trends, especially for change in share, indicate that the recession of the early eighties was more severe in nonmetropolitan areas than in metropolitan areas, which appears to be in contrast with the pattern of the recession in the mid-seventies.

Changes in nonmetropolitan shares of employment by sector from 1979-82 reveal a similar pattern (table 2). For most sectors, the nonmetropolitan share declined during the first few years of the eighties. Data by place of residence since 1982 indicate overall stabilization, with half the sectors gaining in share and half losing. Nonmetropolitan shares of the Nation's employment in agriculture, forestry, fishing, and mining, not surprisingly, are considerably greater than the overall nonmetropolitan share, while the private services are underrepresented in nonmetropolitan areas.

Nonmetropolitan construction and manufacturing were the sectors hardest hit by the recession of the early eighties (table 3). Place-of-residence data indicate that both sectors had recovered somewhat by 1984. There was even a modest gain for nonmetropolitan employment in the construction sector, but by 1984 manufacturing had not recovered to its pre-recession peak. The sectors most underrepresented in nonmetropolitan areas (services and finance, insurance, and real estate) experienced notable gains in employment during the recession. Employment in Government and transportation and public utilities seems to be relatively stable in nonmetropolitan America; however, mining, where growth occurred in the early eighties, experienced a big drop from 1982-83. While trends for agriculture, forestry, and fisheries are unclear, it appears that in the mideighties, nonmetropolitan employment is decreasing, a finding consistent with those from analysts concerned about impacts of the cost-price squeeze on businesses in these sectors. Trends in nonmetropolitan employment also are unclear for the trade sector, which experienced continued increases by place of residence but not by place of work. This difference may result from the inclusion of post-1970 metropolitan areas in the place-of-residence data, or from the inclusion in the data of large numbers of nonmetroplitan residents commuting to work in metropolitan retail and wholesale establishments.

Analysis of employment data for nonmetropolitan areas nationally, as has been pointed out by other writers, may mask considerable regional diversity. During the recession of the early eighties, for example, nonmetropolitan employment in some States continued to increase, and there were substantial declines in others (fig. 1). In 20 States there were more nonmetropolitan

Table 1—U.S. nonmetropolitan employment, 1973-84

Year	By place of work 1/		By place of residence 2/	
	Number	Percentage of national total	Number	Percentage of national total
	Thousands	Percent	Thousands	Percent
1973	19,991	21.6	26,091	30.9
1974	20,370	21.6	26,458	30.8
1975	20,151	21.8	26,126	30.8
1976	20,822	21.9	27,150	31
1977	21,410	21.8	28,317	31.3
1978	22,199	21.6	29,844	31.6
1979	22,683	21.4	29,916	30.9
1980	22,582	21.2	30,150	31
1981	22,658	21.1	30,488	31
1982	22,312	21	30,335	30.5
1983	n.a.	n.a.	30,696	30.4
1984	n.a.	n.a.	31,930	30.4
Percentage change in employment, 1979-82: -1.6			Percentage change in employment, 1979-82: 1.4 1979-84: 6.7	

n.a. = Not available.
1/ Based on delineation of metropolitan areas in 1982.
2/ Based on delineation of metropolitan areas in 1970.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.
U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

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Table 2—Nonmetropolitan shares of total U.S. employment by economic sector, 1979-84

Item	By place of work 1/		By place of residence 2/			
	1979	1982	1979	1982	1983	1984
			Percent			
Agriculture, forestry, and fisheries 3/	63.8	63.4	71.1	70.8	69.5	69.4
Mining	53.2	48.9	59.6	52.7	50.7	52.6
Construction	19.4	18.6	32.6	32	31.1	31.2
Manufacturing	21.4	21	31.3	30.9	31.6	32
Transportation and public utilities	16.3	16.3	26.6	26.8	26.5	26.2
Trade	17.3	17.1	27.4	27.9	27.7	27.9
Finance, insurance, and real estate	11.1	10.8	19	19.4	19.6	19.6
Services	15.6	15.1	23.9	23.3	23.6	23.5
Government	21.7	21.8	32.7	32.5	33	32.9
Nonfarm self-employed and unpaid family workers 4/	28.2	27.9	38.5	37.6	36.7	36.2
Total	21.4	21	30.9	30.5	30.4	30.4

1/ Based on delineation of metropolitan areas in 1982.
2/ Based on delineation of metropolitan areas in 1970.
3/ Employment figures by place of work include "other" nonfarm wage and salary employment. Figures by place of residence include self-employed and unpaid agricultural workers.
4/ Employment figures by place of work include nonfarm proprietors only.

Sources: U.S. Department of Commerce, Bureau of Economic Analysis.
U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

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Table 3—U.S. nonmetropolitan employment changes by economic sector, 1979-84

Item	By place of work 1/					
	1979		1982		1979-82 change	
	Thousands	Percent	Thousands	Percent	Thousands	Percent
Agriculture, forestry and fisheries 3/	2,937	12.9	2,937	13.2	0	0
Mining	504	2.2	550	2.5	46	9.1
Construction	883	3.9	722	3.2	-161	-18.2
Manufacturing	4,510	19.9	3,958	17.7	-552	-12.2
Transportation and public utilities	837	3.7	826	3.7	-11	-1.3
Trade	3,520	15.5	3,515	15.8	-5	-0.1
Finance, insurance, and real estate	564	2.5	593	2.7	29	5.1
Services	2,940	13	3,079	13.8	139	4.7
Government	4,033	17.8	4,048	18.1	15	0.4
Nonfarm self-employed and unpaid family workers 4/	1,954	8.6	2,083	9.3	129	6.6
Total	22,682		22,311		-371	-1.6

(continued)

Table 3—U.S. nonmetropolitan employment changes by economic sector, 1979-84—continued

Item	By place of residence 2/											
	1979		1982		1983		1984		1979-1982 change		1979-84 change	
	Thousands	Percent	Thousands	Percent	Thousands	Percent	Thousands	Percent	Thousands	Percent	Thousands	Percent
Agriculture, forestry and fisheries 3/	2,372	7.9	2,439	8.0	2,381	7.8	2,331	7.3	67	2.8	-41	-1.7
Mining	502	1.7	521	1.7	451	1.5	489	1.5	19	3.8	-13	-2.6
Construction	1,505	5	1,323	4.4	1,384	4.5	1,525	4.8	-182	-12.1	20	1.3
Manufacturing	6,777	22.7	6,111	20.1	6,117	19.9	6,551	20.5	-666	-9.8	-226	-3.3
Transportation and public transportation	1,405	4.7	1,449	4.8	1,398	4.6	1,479	4.6	44	3.1	74	5.3
Trade	4,778	16	5,191	17.1	5,246	17.1	5,534	17.3	413	8.6	756	15.8
Finance, insurance, and real estate	988	3.3	1.090	3.6	1,137	3.7	1,182	3.7	102	10.3	194	19.6
Services	3,822	12.8	4,283	14.1	4,536	14.8	4,707	14.7	461	12.1	885	23.2
Government	5,033	16.8	5,045	16.6	5,127	16.7	5,193	16.3	12	0.2	160	3.2
Nonfarm self-employed and unpaid family workers 4/	2,733	9.1	2,882	9.5	2.918	9.5	2,939	9.2	149	5.5	206	7.5
Total	29,915		30,334		30,695		31,930		419	1.4	2,015	6.7

1/ Based on delineation of metropolitan areas in 1982.
2/ Based on delineation of metropolitan areas in 1970.
3/ Employment figures by place of work include "other" nonfarm wage and salary employment.
4/ Employment figures by place of work include nonfarm proprietors only.

Sources: U.S. Department of Commerce, Bureau of Economic Analysis.
U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

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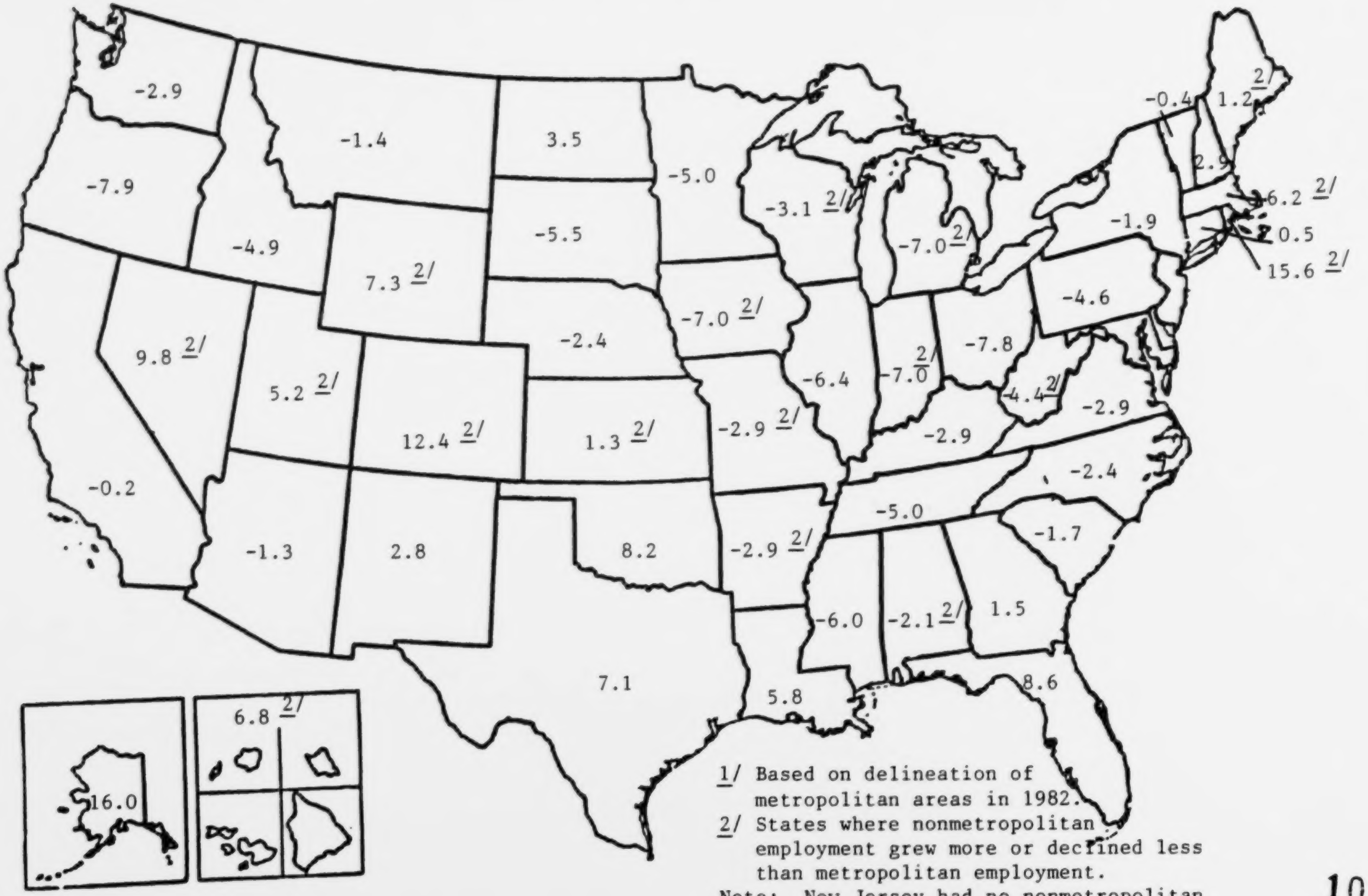
FIGURE 1

Percentage Change in Nonmetropolitan Employment, by place of work, 1979-82 1/



1/ Based on delineation of metropolitan areas in 1982.

2/ States where nonmetropolitan employment grew more or declined less than metropolitan employment.

Note: New Jersey had no nonmetropolitan areas in 1982.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

employees in 1982 than in 1979. Percentage gains generally were highest in the West, though the greatest decrease among all States occurred in Oregon. Several States in the South and in New England also had substantial increases. Besides Oregon, other States with large declines were located mostly in the Midwest and MidSouth. While nonmetropolitan areas overall fared worse than metropolitan areas during the recession, in 20 States nonmetropolitan employment grew more or declined less than metropolitan employment. Examination of figure 1 does not reveal distinct similarities in the location of these 20 States.

Although 20 States had more nonmetropolitan jobs in 1982 than in 1979, employment peaked in 1982 for only 10 States (fig. 2). On the other hand, 22 States, mostly in the Midwest, Mid-Atlantic, and Pacific Northwest, reached their greatest nonmetropolitan employment in 1979. Another 15 States peaked in 1981, suggesting that they were not as vulnerable to the recession as States peaking earlier.

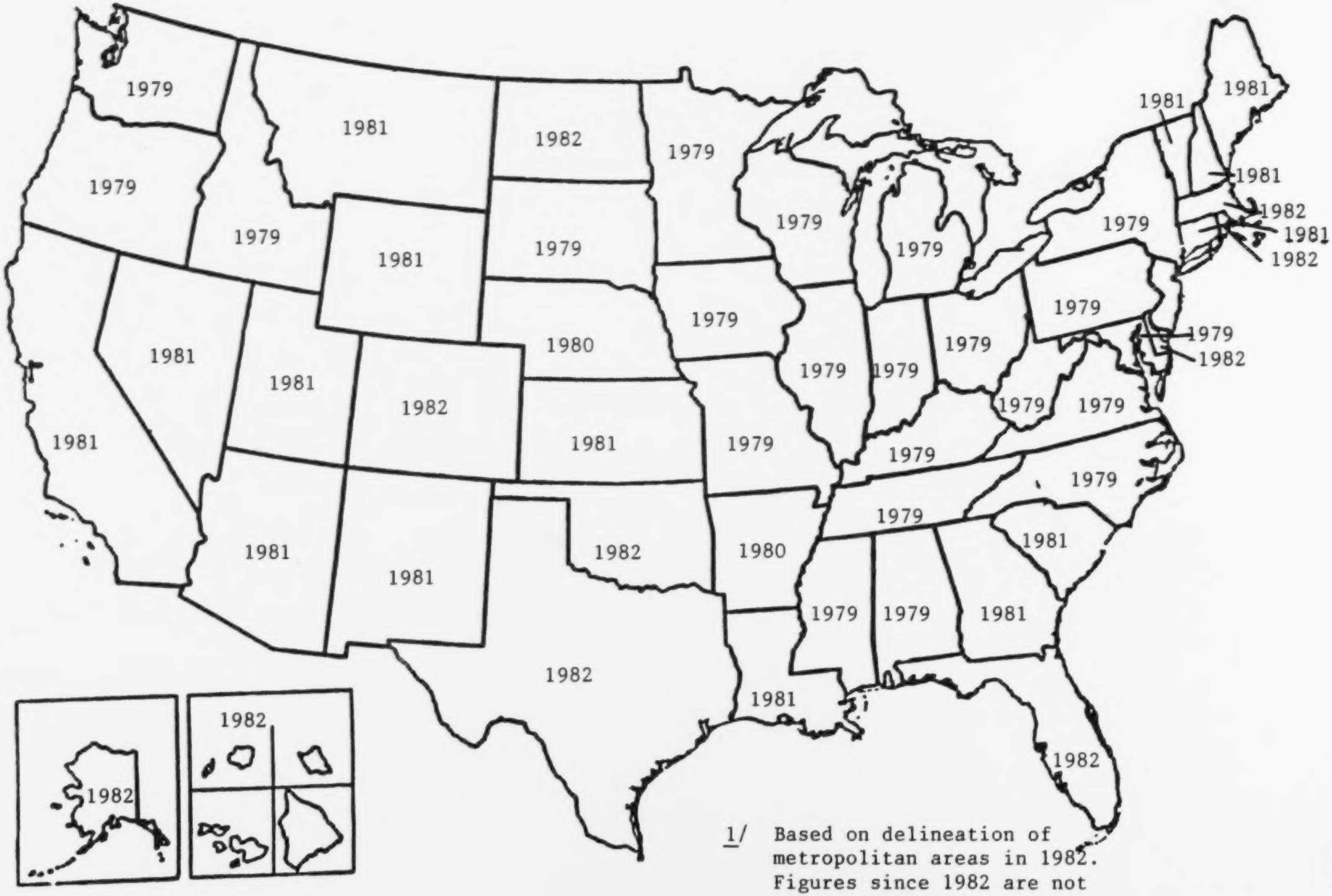
Changes in nonmetropolitan employment have had more impacts on the economies of some States than on others. In the early eighties, nonmetropolitan areas accounted for more than 50 percent of employment in 15 States, most of which were west of the Mississippi River or in New England (fig. 3). Computation of changes in nonmetropolitan employment as percentages of total State employment indicates that South Dakota, Mississippi, Idaho, and Iowa were most severely affected by nonmetropolitan declines in the early eighties (fig. 4). States bordering the Great Lakes generally were no worse off than other States where nonmetropolitan employment decreased. Adjusted increases were greatest in Alaska and Wyoming, States also characterized by vast rural areas. Computation of adjusted changes in nonmetropolitan employment suggest that nonmetropolitan decline or growth has had particularly significant impacts in some States, and that special attention may need to be paid to problems in these States.

Sectoral changes in nonmetropolitan employment varied considerably among States during the early eighties (table 4). Nearly all States experienced nonmetropolitan gains in services and finance, insurance, and real estate; declines occurred in construction and manufacturing for most States. The number of States experiencing nonmetropolitan decreases in government employment was greater than the number where growth occurred, despite overall growth nationally in nonmetropolitan areas. Disclosure was a problem for trade and transportation and public utilities, but it appears that the number of States losing nonmetropolitan employment exceeded the number of States gaining. Agricultural employment in nonmetropolitan areas decreased nationally, but more States gained than lost employment in this sector. Every State gained in the number of nonfarm proprietors.

Data for the early eighties thus support the findings of other recent studies. Place-of-residence data since 1982 indicate that the private service industries have experienced the most growth, a finding consistent with the projections of Bluestone and Daberkow. The shifting balance between metropolitan and nonmetropolitan areas noted by Garnick appears to have continued during the early eighties. While the end of the nonmetropolitan turnaround suggested by Richter may have occurred nationally, it appears that regional differences in nonmetropolitan growth and decline continue. This regional variation is undoubtedly associated with the diversity of nonmetropolitan areas identified by Kuehn and Bender, and Ross, Green, and Hoppe.

FIGURE 2

Peak Year for Nonmetropolitan Employment, by place of work, 1979-82 1/



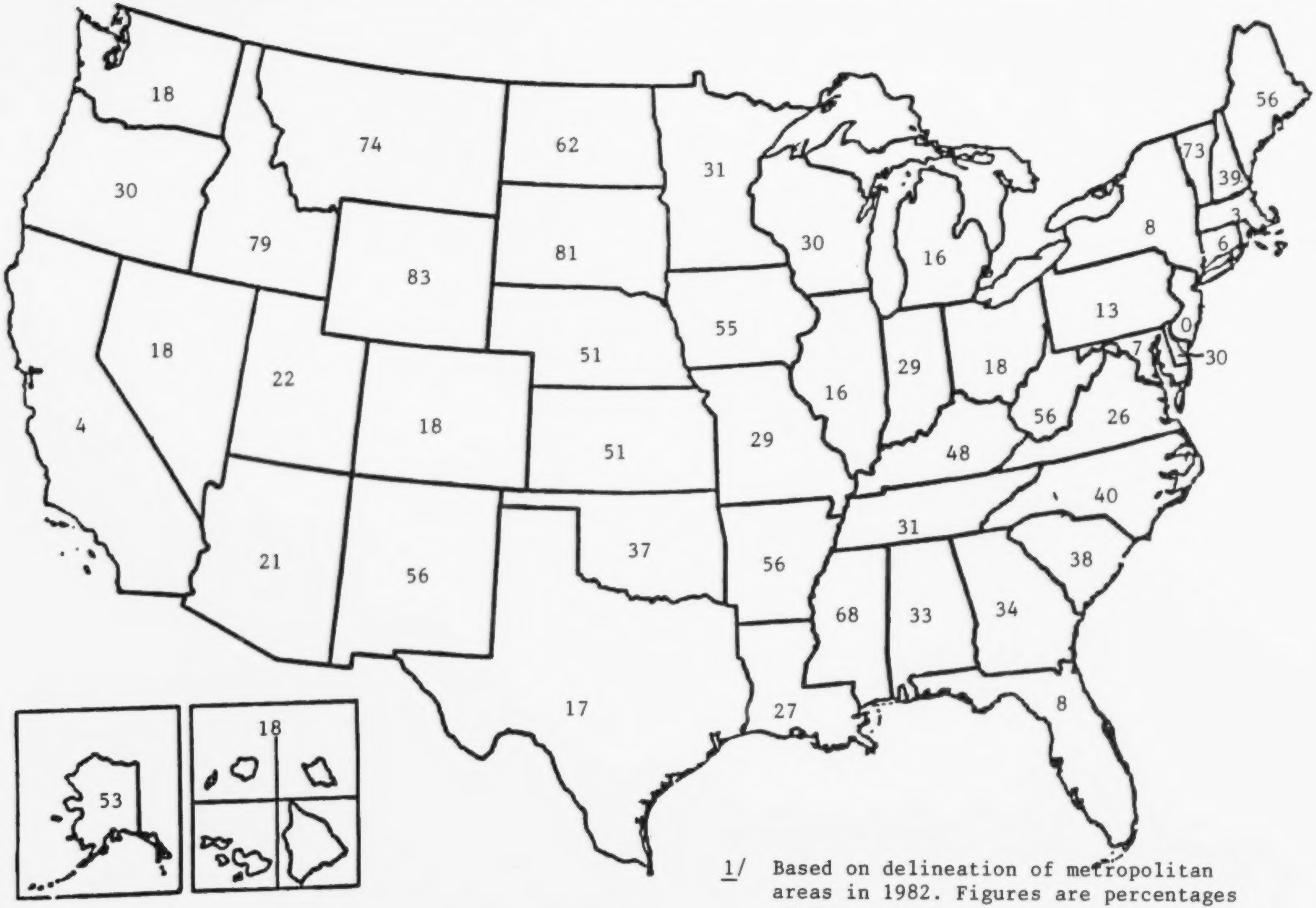
1/ Based on delineation of metropolitan areas in 1982. Figures since 1982 are not yet available.

Note: New Jersey had no nonmetropolitan areas in 1982.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

FIGURE 3

Nonmetropolitan Shares of State Employment, by place of work, 1979-82 Average 1/

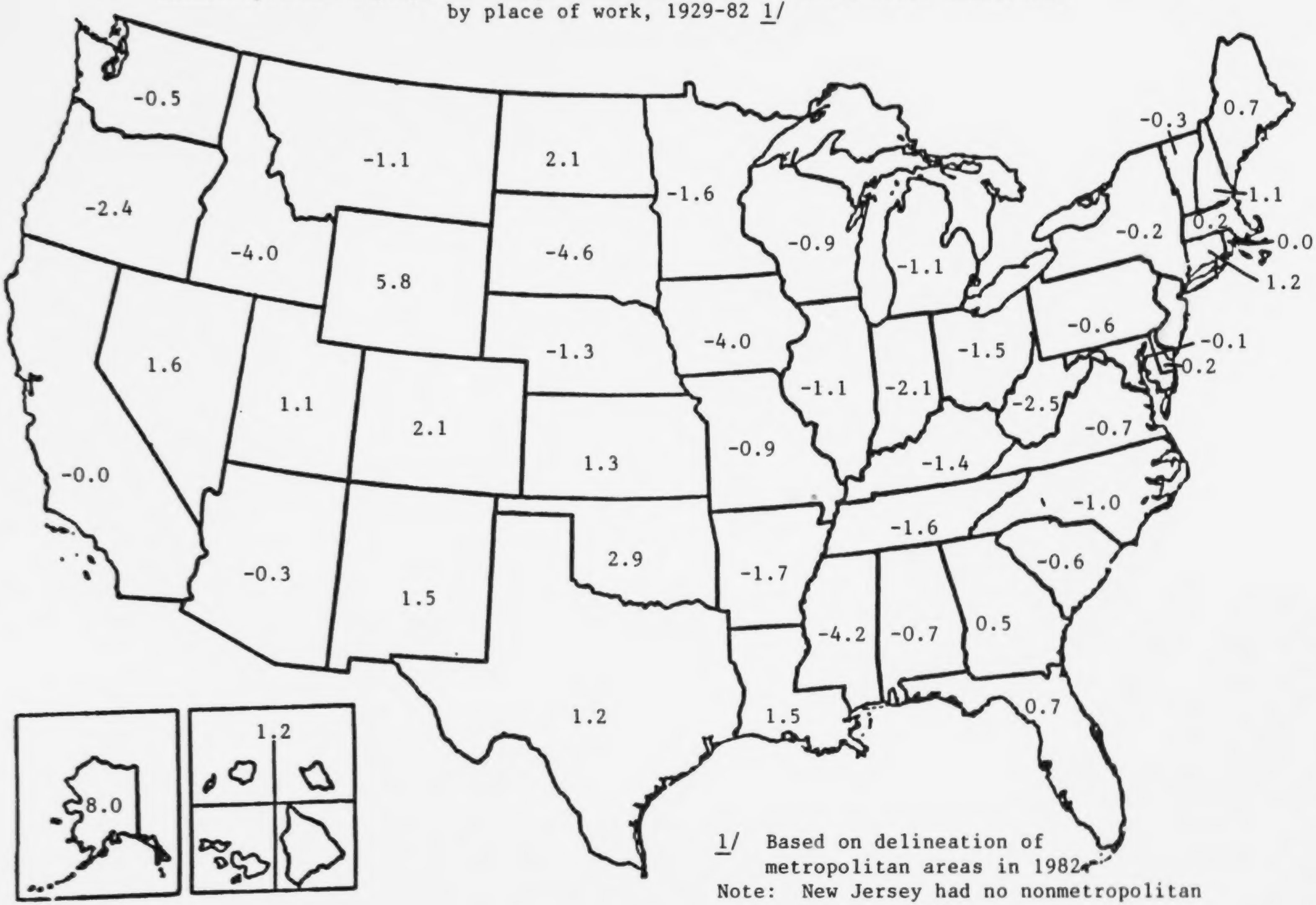


1/ Based on delineation of metropolitan areas in 1982. Figures are percentages of State totals.

Source: U.S. Department of Commerce Bureau of Economic Analysis.

FIGURE 4

Nonmetropolitan Employment Change as a Percentage of Total State Employment, by place of work, 1929-82 1/



1/ Based on delineation of metropolitan areas in 1982.

Note: New Jersey had no nonmetropolitan areas in 1982.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Table 4—Number of states experiencing increases or decreases in nonmetropolitan employment by economic sector, 1979-82 1/
(By place of work)

Item	Nonmetropolitan employment as percent of national (1979-82 average)	States experiencing nonmetropolitan employment			1979-82 change in nonmetropolitan employment as percent of national
		Increases	Decreases	data disclosure	
	Percent	Number			Percent
Farm	12.3	28	21	0	-0.7
Agricultural services, forestry, fishing, and other	0.8	4	0	45	11.9
Mining	2.4	8	1	40	9.2
Construction	3.6	8	36	5	-18.2
Manufacturing	18.9	2	47	0	-12.2
Transportation and public utilities	3.7	13	24	12	-1.3
Trade	15.6	11	13	25	-0.2
Finance, insurance, and real estate	2.6	39	4	6	5.3
Services	13.3	41	1	7	4.7
Government	18	20	29	0	0.4
Nonfarm proprietors	8.9	49	0	0	6.6
Total number of States	NA	21	28	0	NA
Total percentage change	NA	NA	NA	NA	-1.6

NA = Not applicable.

1/ Based on delineation of metropolitan areas in 1982. New Jersey had no nonmetropolitan areas in 1982.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

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Unemployment and Underemployment: Recent Trends

A discussion of recent trends in rural labor markets is incomplete without a summary of unemployment and underemployment. Declines in employment, in the absence of outmigration, suggest increases in unemployment. Underemployment, sometimes termed "subemployment," occurs when employees are required involuntarily to work part time, or when wages are insufficient to raise incomes above the poverty level or some other measure of a decent standard of living. Both part-time work and low-wage employment are more characteristic of nonmetropolitan areas than of metropolitan areas (for example, Marshall 1974; Tweeten 1978; Nilsen 1979; Briggs 1981). Many labor market analysts believe that underemployment is better than unemployment for assessing the underutilization of human resources. Each measure is difficult to estimate accurately for rural areas.

Estimates of unemployment rates in the seventies generally were lower for nonmetropolitan areas than for metropolitan areas (Schaub 1981, p. 3), but by 1980, this situation had reversed (table 5). In the early eighties, the nonmetropolitan unemployment rate exceeded the metropolitan rate nationally and in each of the four major census regions except the North Central (Daberkow and Bluestone 1984, p. 18), and by 1982 the gap between metropolitan and nonmetropolitan rates had widened. Moreover, nonmetropolitan areas fared worse than metropolitan areas when unfavorable changes in unemployment rates were combined with unfavorable changes in employment, though there was considerable geographic diversity in these changes (Daberkow and Bluestone 1984, pp. 21-23).

Underemployment for nonmetropolitan areas can be estimated to some extent by two measures collected for the Current Population Survey: persons working part time for economic reasons and discouraged workers. Since 1973, both measures have been proportionally higher for nonmetropolitan areas than for metropolitan areas, and the recession of the early eighties had greater impact on part time and discouraged workers in nonmetropolitan areas than in metropolitan areas (table 6). Incorporating these two measures with estimated unemployment allows the computation of an adjusted unemployment rate. As table 6 shows, the rates for nonmetropolitan areas, which were about the same as those for metropolitan areas in the midseventies, began to exceed rates for metropolitan areas in 1978 and have been nearly 2 percentage points higher since 1982. Although there was some improvement in 1984, the number of involuntary part-time workers and discouraged workers was still higher than in any year in the decade prior to 1982.

Summary

Earlier studies and the data presented here suggest the following generalizations about recent trends in rural labor markets. (1) Growth in nonmetropolitan areas slowed considerably during the late seventies and early eighties. (2) This slowdown was greater in the Northeast and Midwest than in the South and West. (3) Regional trends mask important subregional variation: several States in the South and West had among the highest declines in nonmetropolitan employment from 1979-82, and all but one State in New England experienced increases. (4) Metropolitan areas, especially smaller ones, recently have grown faster than have nonmetropolitan areas. (5) Nonmetropolitan areas near metropolitan areas have experienced more growth recently than have more remote nonmetropolitan areas. (6) Nonmetropolitan America is becoming more diversified, but the economic base of many rural areas still is characterized by dependence upon a single, usually slow-growth or declining, sector. (7) Much of

Table 5—U.S. nonmetropolitan and metropolitan unemployment, by place of residence, 1973-84 1/

Year	Nonmetropolitan		Metropolitan	
	Unemployed	Unemployment rate	Unemployed	Unemployment rate
	Thousands	Percent	Thousands	Percent
1973	1,210	4.4	3,161	5.1
1974	1,430	5.1	3,645	5.8
1975	2,260	8	5,570	8.7
1976	2,040	7	5,248	8
1977	1,990	6.6	4,866	7.3
1978	1,837	5.8	4,210	6.1
1979	1,800	5.7	4,163	5.8
1980	2,362	7.3	5,087	7
1981	2,603	7.9	5,476	7.5
1982	3,405	10.1	7,273	9.5
1983	3,460	10.1	7,257	9.4
1984	2,796	8.1	5,743	7.3

1/ Based on delineation of metropolitan areas in 1970.

Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey

Table 6—U.S. nonmetropolitan and metropolitan part-time and discouraged workers, by place of residence, 1973-84 1/

Year	Nonmetropolitan					Metropolitan				
	Persons working part-time for economic reasons		Discouraged workers		Adjusted unemployment rate 2/	Persons working part-time for economic reasons		Discouraged workers		Adjusted unemployment rate 2/
	Thousands	Percent	Thousands	Percent		Thousands	Percent	Thousands	Percent	
1973	947	3.6	266	1.0	7.1	1,573	2.7	429	.7	7.1
1974	1,137	4.3	237	.8	7.9	1,806	3.0	462	.7	7.9
1975	1,372	5.3	387	1.4	11.6	2,376	4.1	732	1.1	11.5
1976	1,295	4.8	310	1.1	10.2	2,245	3.7	645	1.0	10.6
1977	1,305	4.6	351	1.2	9.8	2,224	3.6	641	1.0	9.8
1978	1,300	4.4	320	1.0	8.8	2,128	3.3	529	.8	8.4
1979	1,325	4.4	267	.8	8.5	2,153	3.2	460	.6	8.0
1980	1,631	5.4	333	1.0	10.7	2,583	3.8	555	.8	9.5
1981	1,749	5.7	381	1.2	11.5	2,908	4.3	658	0.9	10.3
1982	2,304	7.6	567	1.7	14.9	3,865	5.6	914	1.2	13.1
1983	2,250	7.3	607	1.8	14.9	4,016	5.7	1,024	1.3	13.1
1984	2,107	6.6	446	1.3	12.2	3,636	5.0	750	1.0	10.4

1/ Based on delineation of metropolitan areas in 1970.
2/ Unemployment rate is adjusted to include discouraged workers and a half of the workers employed part-time for economic reasons.

Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

the recent growth in nonmetropolitan areas has occurred in the service industries, a trend projected to continue through the eighties. (8) Nonmetropolitan employment nationally has increased since the peak of the recent recession, but recovery has been slower in nonmetropolitan areas than in metropolitan areas. (9) Unemployment and underemployment rates in nonmetropolitan areas have been higher than those in metropolitan areas during the early eighties, and the differential between the two types of areas has widened. Because unemployment and underemployment are inadequately measured for nonmetropolitan areas, it is likely the actual situation is more dismal than the official estimates suggest. (10) Governmental policies addressing the needs of rural labor markets should be based upon a better understanding of the diversity of nonmetropolitan areas and the forces underlying growth, decline, and stability among and within regions.

Issues and Topics for Additional Research

A discussion of issues and topics for additional research on growth, decline, and stability in rural labor markets could be extremely wide ranging. the rural development policy act of 1980, for example, calls for the preparation of a rural development strategy which would take into account the needs to:

A. improve the economic well-being of all rural residents and alleviate the problems of low-income, elderly, minority, and otherwise disadvantaged rural residents;
B. improve the business and employment opportunities, occupational training and employment services, health care services, educational opportunities, energy utilization and availability, housing, transportation, community services, community facilities, water supplies, sewage and solid waste management systems, credit availability, and accessibility to and delivery of private and public financial resources in the maintenance and creation of jobs in rural areas;
C. improve State and local government management capabilities, institutions, and programs related to rural development and expand educational and training opportunities for State and local officials, particularly in small rural communities;
D. strengthen the family farm system; and
E. maintain and protect the environment and natural resources of rural areas.

Most of these needs relate directly or indirectly to the provision of jobs or the enhancement of incomes in rural labor markets. A comprehensive treatment of these topics is beyond the scope of this paper. The procedure here will be to follow the general format of the preceding discussion and to focus on conceptual models, data and definitional issues, and recent and emerging trends in rural labor markets. Where applicable, attention will be directed to issues of growth, decline, stability, and adaptability.

Conceptual Models

It has been nearly 20 years since Brian Berry (1967b) outlined strategies, models, and economic theories of development in rural regions. Berry and other writers in the sixties used elements of various conceptual models to explain rural development, which was viewed largely as a residual of urban growth. The widespread growth of rural America in the late sixties and early seventied came as a surprise to some of these writers, and illustrated clearly that existing models were "ill-equipped to explain the new types of rural growth and changing economic patterns found in the rural areas of the advanced industrial society" (Bradshaw and Blakely 1979, p. 33).

There remains a need for a conceptual model that accounts for long-term trends and can be used to predict future changes in the growth and decline of rural labor markets. Recent efforts, for example, to project nonmetropolitan changes in employment for the remainder of the decade and to interpret recent trends suggest this continuing need (for example, Bluestone and Daberkow 1985). As Nelson (1984, p. 694) has noted, a "paradigm" for rural development would enable analysts to judge whether trends of the late seventies and early eighties are "consistent with the nature of the structure of rural areas before the late sixties and thus expected or whether the structure has changed and the population and employment shifts should surprise us."

Several writers recently have attempted to interpret changes of the late seventies and early eighties within a conceptual framework. In his analysis of nonmetropolitan changes in population and migration during the seventies, Richter (1985, pp. 261-62) interprets the turnaround at the beginning of the seventies and the slowdown in growth near the end of the decade as evidence of convergence toward an equilibrium in metropolitan/nonmetropolitan patterns of settlement, which was earlier hypothesized by Wardwell (1977). Similarly, Garnick (1984, p. 270) suggests that regional growth and decline result from a "to and fro" process in which an equilibrium is approached or reached as new industries build where old ones contract.

Perhaps a model that accounts for long-term and short-term changes should incorporate concepts in addition to or other than those discussed earlier in this paper. Schumpeter's ideas on "creative destruction" might be useful for understanding long-term change, as might Kondratiev cycles (Rothwell 1982). Another possibility is catastrophe theory, which has been used by Miernyk (1982, pp. 98-106) to interpret unbalanced regional growth and the recent slowdown in national economic growth.

Theorists attempting to derive models to explain and predict changes should keep in mind the needs and abilities of politicians and other decision-makers who ideally would use these models to formulate policies for dealing with problems in rural labor markets. It is unlikely that policies will be adopted if they are based upon conceptual models that are difficult to understand and do not appear to conform to the "real world." The challenge is to explain the complex simply, but not so simply that important aspects of the explanation are omitted.

Data and Definitional Issues

Defining rural labor markets and obtaining data for testing hypotheses based upon these definitions are two of the most critical issues facing builders of conceptual models. Nonmetropolitan is used synonymously with rural throughout this paper, yet there are many rural people and jobs in metropolitan areas, particularly in the western United States. Rural portions of these metropolitan areas may be more remote from the area's central city than are some nearby nonmetropolitan communites. Although useful information about places of less than 2,500 and open areas is provided by the Census of Population, it is not provided often enough for examination of ongoing, short-term trends.

Rural areas within nonmetropolitan areas also merit more attention. Lichter and Fuguitt (1982), for example, have found that there was a deconcentration from 1950-75 within nonmetropolitan areas as well as from metropolitan areas to nonmetropolitan areas. This deconcentration continued to 1980, and during the preceding decade, more than 80 percent of the total growth in nonmetropolitan areas occurred outside places of 2,500 or more population (Lichter, Fuguitt, and Heaton 1985, p. 93). The rural-labor-market implications of this growth are unclear, for it was only partly related to changes in the availability of jobs. Again, except for decennial census data, it is difficult to explore further the relationships between strictly rural population changes and strictly rural employment changes, a topic that could be of much interest given the problems experienced by nonmetropolitan areas in the early eighties.

Another issue is the comparability of data for nonmetropolitan areas over time and by place of work or place of residence. As noted earlier in this paper and recently by Bluestone (1984), employment trends and other data based upon older delineations of metropolitan are likely to be biased upward for nonmetropolitan counties and downward for metropolitan counties because of the older delineation's inclusion of counties subsequently becoming metropolitan. Moreover, "economic measures for nonmetro counties are likely to be more affected by reclassification than measures for metro areas because transition counties have usually represented a sizable part of the parent group of nonmetro areas but a smaller part of the receiving group of counties" (Bluestone 1984, p. 9).

Differences in the base year for delineating metropolitan areas also hinder comparisons between employment by place of work and employment by place of residence. Annual place-of-work data available from the Bureau of Economic Analysis are based upon the most current delineation of metropolitan; place-of-residence data from the Current Population Survey are based upon the delineation of metropolitan areas in 1970. Trends over time can be compared for both types of data; however, it is difficult to determine whether differences are due to where employment is counted or to the delineation of metropolitan and nonmetropolitan.

The most fundamental data issue is the inadequacy of statistics for monitoring and analyzing short-term trends in rural labor markets. Without such statistics it is difficult to test hypotheses or to develop policy for resolving rural problems. As Hobbs and Dillman (1982, p. 7) have noted: "It is one thing to ask a question and quite another to ask a researchable question." Efforts encouraging governmental agencies to provide timely, detailed data for asking and potentially answering researchable questions about rural labor markets must continue. Additionally, current and potential users need better information about and access to existing data.

Recent and Emerging Trends in Rural Labor Markets

While there unquestionably is a need to develop better data and more integrated models of growth and decline in rural labor markets, little research is likely to be directed specifically to these topics. Most investigators probably will use existing conceptual models to study smaller pieces of the total picture with the hope that their efforts will lead to a fuller understanding of emerging trends and their causes. There are many topics on which such efforts can focus, and some of these will be discussed in the following section.

The National Economy and Rural Labor Markets. Improvements in transportation and communication has led to more complete integration of Nonmetropolitan America into the national economy. With this increased integration researchers should examine further whether national growth and decline impacts nonmetropolitan areas differently than metropolitan areas. It would seem that because nonmetropolitan areas are less economically diversified than metropolitan areas, they would be less able to adjust to decline or to take advantage of growth. Daberkow and Bluestone (1984, p. 16), nonetheless, have suggested that "during a cyclical decline in economic activity or during a period of slow secular growth, larger disparities in economic well-being are likely to develop among regions than between nonmetro and metro areas," and that "changes in national fiscal or monetary policy to counteract or smooth the business cycle may be more effective in reducing economic inequities among regions than between nonmetro and metro areas." Their study, however, was somewhat broad in scope, and more detailed examination of differential impacts is needed.

Increased Atractiveness of Metropolitan Areas. Analysis of data during the early eighties revealed that nonmetropolitan areas fared worse than metropolitan areas, and the available evidence since 1982 shows that the nonmetropolitan share of employment has not reached levels of the seventies. While this may be associated with differential impacts of the recession, it could reflect an increase in the attractiveness or a decline in the unattractiveness of metropolitan areas. Richter (1985) reported that metropolitan areas, especially smaller ones, began to grow faster than nonmetropolitan areas during the late seventies, and Longino and others (1984) demonstrated that the percentage of older Americans migrating to metropolitan areas was greater from 1975-80 than in the last half of both the fifties and sixties, and that the percentage migrating to nonmetroplitan areas decreased from earlier time periods. Garnick (1984), as mentioned earlier in this paper, proposed that nonmetropolitan growth may slow in the eighties because wage rate differentials between metropolitan areas and nonmetropolitan areas are being reduced, workers in metropolitan areas are becoming more willing to negotiate wage bargains and work rules more favorable to maintaining and creating jobs, and community leaders in metropolitan areas are becoming more sensitive to the importance of taxes in the locational decisions of businesses. These findings suggest that factors influencing changes in the relative attractiveness of metropolitan and nonmetropolitan areas for businesses and people may need to be reassessed.

International Money Market and the Ability of Nonmetropolitan Areas to Export. Numerous writers have argued the importance of the export base model for regional development, and many nonmetropolitan communities rely largely upon exports for their economic livelihood. At the national level, the ability to export is at least partly dependent upon the strength of the U.S. dollar relative to other currencies. If the value of the dollar is high, American exporters often find it more difficult to compete with foreign producers where currencies are weak. Conversely, "the lower value of the dollar on international markets serves to improve the potential...to meet foreign competition" (Seyler and Lonsdale 1979, p. 183). Additional research should be undertaken to estimate the impacts of the value of the dollar on the ability of nonmetropolitan producers to export outside the United States and to identify which nonmetropolitan areas are most affected by changes in the value of the dollar relative to other currencies.

Foreign Competition. One of the most significant trends being experienced by the United States and other countries is their integration into a global economy (for example, Editors of *Business Week* 1982; Naisbitt 1982). This integration has contributed to increased foreign competition as low-cost producers elsewhere are able to sell in the United States at prices below those for domestically made products. Increased imports nationally have strained the financial situation for low-wage manufacturers, especially those in the South (for example, Hansen 1979), and higher wage manufacturers in the nonmetropolitan Frost Belt have been hurt by imports and stagnant or declining demand in the steel and motor vehicle industries. Aluminum companies and timber-products companies in the Northwest also have had to contend with increased imports and stagnant demand. The problem of imports has become severe enough that there have been increased calls for protectionism and, as of September 1985, Congress was faced with 300 to 400 bills to limit imports (Grady 1985).

There needs to be more detailed investigations on the impact of foreign competition on rural labor markets. Most of the discussion thus far appears to be relatively general and while foreign competition is certainly a problem, there has been little detailed investigation of the specific linkages between foreign competition and economic decline in nonmetropolitan areas. More research also needs to be directed to the shift of production from nonmetropolitan areas to locations outside the United States. Growth of low-wage manufacturing in Mexico just across the border from the United States, where there are now some 700 plants (Magnuson 1985), is an example of the type of activity that may be leading to economic distress in nonmetropolitan communities.

Reverse Investment. During the seventies, the pace of foreign investment in the United States accelerated, and it appears that much of this new investment went to established concentrations of economic activity (McConnell 1980). Increased concerns about international terms of trade may lead to pressures for adoption of laws (for example, domestic content legislation) encouraging or requiring certain types of foreign producers to manufacture products in the United States. Research is needed to ascertain the degree to which foreign investors have been locating in nonmetropolitan areas, the kinds of economic activities in which investments have been made, and the likelihood of much additional growth from foreign investment in nonmetropolitan areas.

Deindustrialization and Plant Closings. Declines in manufacturing employment during the seventies and since have convinced many observers that the United States is deindustrializing (for example, Bluestone and Harrison 1982). Concerns about deindustrialization have been greatest in the Midwest and Northeast, where numerous communities depend on heavy manufacturing, and in parts of the South and Northwest. Because a growing proportion of nonmetropolitan areas have come to rely on manufacturing as the most important part of their economic base (Kuehn and Bender 1985), the significance of plant closings as an issue in rural labor markets has increased.

To date, there has been little attention paid specifically to nonmetropolitan plant closings. Notable execptions are Barkley (1978) who found that locally owned nonmetropolitan firms in Iowa were more likely to close than branch plants of multiplant corporations, but because branch plants had higher out-migration rates, they were more locationally unstable; Erickson (1980) who found that nonmetropolitan branch plants in Wisconsin did not have a high rate of closure; and Anderson and Barkley (1982), who concluded that nondurable goods manufacturers in nonmetropolitan Iowa were more locationally stable than durable goods manufacturers. Additionally, Miller (1980) concluded that nationally, the rate of out-migration for multiplant corporations in nonmetropolitan areas was low, and that the rate of closure was lower for multiplant corporations than for independent firms. Further research on nonmetropolitan plant closings should be directed to comparisons of the extent and characteristics of closings in the eighties with those in the seventies and to variations in the abilities of different types of nonmetropolitan areas to adjust to closings. This latter focus should include analyses of the kinds of employment that are growing in areas affected by closings, the extent to which other employers have hired people losing jobs, and the characteristics of businesses re-opening closed facilities.

Dual Labor Markets. The concept of dual labor markets is based upon the notion of primary markets and secondary markets for labor (Doeringer and Piore 1971, pp. 165-77). Jobs in primary markets have high wages, good working conditions, and other favorable attributes; those in secondary markets have low wages, poor working conditions, and other unfavorable characteristics. Many jobs in nonmetropolitan areas are considered secondary (Averitt 1979; Bradshaw and Blakely 1982). The most obvious are low-wage manufacturing; however, certain types of jobs in agriculture, tourism, and other part-time, low-wage sectors also can be classified as secondary. Even within some comparatively high-paying sectors (for example, timber processing), there may be a sizable proportion of secondary workers (Stevens 1979). Additional research should be undertaken on the relative proportion of primary jobs and secondary jobs in rural labor markets, on changes in these proportions over time, on which nonmetropolitan areas have the greatest proportions of secondary workers, and on strategies for improving the economic well-being of secondary workers.

Growth of the Services Sectors. Data for employment in the late seventies and early eighties clearly show that the services have performed better than other sectors, and projections to 1990 indicate continued nonmetropolitan growth in services (Bluestone and Daberkow 1985). Despite the strength of services, jobs in these sectors on average are somewhat low paying, and there are questions about how long such jobs can continue "stoking the economy" (Pennar and Mervosh 1985). Moreover, many types of service jobs are "nonbasic" rather than "basic." Nonmetropolitan areas frequently "lack the size, relative location, or site amenities to compete successfully for business or personal service firms...; the service sector in these areas often depends upon growth in another sector, such as manufacturing, for entry-level thresholds to be met before any growth can ensue" (Seyler and Lonsdale 1979, p. 183). Nonetheless, some observers believe that services can contribute substantially to nonmetropolitan growth (Menchik 1981; Smith and Pulver 1981; Smith 1984).

More detail on the importance of services to growth and stability in rural labor markets is warranted. What specific types of service industries have shown the most growth? In what sizes of communities and in which regions can services be considered "basic," and where are they more likely to be "nonbasic"? How can rural community leaders facilitate local growth of the services sectors? Answers to these questions should include a thorough analysis of the potential of "retirees as a growth industry" (for example, Summers and Hirschl 1985).

One-sector Dependency and Diversification. Because many nonmetropolitan areas are largely dependent on one economic sector, diversification often is suggested as a strategy for economic development. Diversification may mean increased growth in services, but it also can arise from additional manufacturing, Government, or energy-related activities in areas where these sectors are not already the most important part of the economic base. Manufacturing, for example, has contributed strongly to growth in agriculturally dependent areas (Deavers and Brown 1985, p. 11), but future gains in diversification through manufacturing are debatable.

At the national level, it has been demonstrated that small businesses of many types have played a major role in growth and diversification (for example, Birch 1979), and the promotion of small-business expansions and startups has become a major objective of economic developers. Small businesses, however, have a high rate of failure, and there is some doubt that they are a reliable source of new jobs in nonmetropolitan areas. A recent report by Miller (1985, p. 10) revealed that small, independently owned rural businesses "create many jobs when new, but high failure rates and low job expansion lead to net losses after 5 years." Miller further concluded that most new jobs in nonmetropolitan areas are created by affiliates of large corporations.

Rural diversification through small business development, industrial attraction, or other ways will be difficult. To diversify, nonmetropolitan areas may have to adopt a strategy of adaptability or flexibility "to live dangerously in a battle of wits in a world of great uncertainty" (Thompson 1969, p. 25). Strategies for nonmetropolitan diversification need to be more clearly outlined. Do such strategies vary by region, type of economic specialization, and size of community? Can rural labor markets survive in the absence of economic diversity, and, if so, which types are most likely to survive?

People and Communities Left Behind. People and communities unable or unwilling to adapt or to "hold on" often get "left behind" (President's National Advisory Commission on Rural Property 1967; Whiting 1974). Those left behind are characterized by high rates of unemployment, widespread underemployment, and low incomes. The poverty level is a commonly used measure of personal distress, and the proportion of persons below the poverty level has long been higher in nonmetropolitan areas than in metropolitan areas. During the last 20 years, the rate of nonmetropolitan poverty has been decreasing, and the gap between nonmetropolitan and metropolitan areas has narrowed (for example, Seninger and Smeedling 1981). In 1983, the poverty rate in nonmetropolitan areas was 18.3 percent, a drop of nearly 50 percent from 1959; in metropoltian areas the rate had decreased from 15.3 percent in 1959 to 13.8 percent in 1983 (O'Hare 1985, p. 15). For both metropolitan and nonmetropolitan areas, however, the rate had increased from 1978-83, with the greatest gain in nonmetropolitan areas. Geographically, the highest poverty rates continue to be in the South, though the gap between the South and other regions has narrowed substantially.

Nonmetropolitan poverty also has been concentrated historically in the South. Ross, Green, and Hoppe (1984) have identified 10 percent of all nonmetropolitan counties as persistently low income and most are in the South. Hoppe (1985) has demonstrated that while many of the poorest counties have remained persistently low income over time, some have improved their status. Manufacturing and services have accounted for the most growth, but the contributions of these and other sectors have varied from one time period to another. The contribution of earnings to income growth has been considerably more important than contributions of either transfer payments or property incomes in the poorest counties (Hoppe 1985, p. 32). Despite some improvement, "over 25 percent of people in persistently low-income counties failed to earn enough income to exceed the official poverty line" (Deavers and Brown 1985, p. 8).

Substantial strides have been made in alleviating distress in rural labor markets, but the persistence of poverty suggests the need for additional research. This need has been highlighted in the early eighties when unemployment rates (including adjusted rates) and poverty levels increased from the late seventies, and the gap between nonmetropolitan and metropolitan distress widened. Most of the topics already mentioned in this section have poverty-related implications and should be included in further research on rural economic distress. Discussion also should continue on emerging patterns of distress, reasons for these patterns, the likelihood of long-term distress, alternatives for alleviating distress, the relationship between incomes and rural costs of living, and procedures for measuring underemployment and unemployment.

Diversity and Regional Trends. If there is one word characterizing rural labor markets, it is "diversity." Persons investigating rural labor markets should make sure that this diversity is known to policymakers developing strategies for dealing with rural problems. Diversity occurs not only interregionally but also intraregionally. Policies designed without sufficient awareness of intraregional differences are as unlikely to be successful as those developed under the assumption that there is little interregional variation. Research should focus on these intraregional differences as well as interregional ones. Case studies of specific topics contribute to a better understanding of intraregional variations and should be encouraged.

While there is much diversity in rural labor markets, analysts should attempt to find underlying trends and relate these trends to conceptual models. Testing of conceptually well-defined hypotheses may lead to more complete models; investigators should indicate explicitly how awareness of diversity is both conceptually meaningful and useful for developing policy. The most insightful research likely will be based on sound conceptual thinking and "hunch, imagination, and creativity, which are the essential tools for sorting today's trend from tomorrow's countertrend" (Dillman and Hobbs 1982, pp. 416-17.)

CONCLUSION

Growth, decline, and stability in rural labor markets will continue to be an important topic for research through the remainder of the eighties. While stability is probably the goal for most nonmetropolitan communities, some will face rapid growth and considerably more will face stagnation and decline. Factors influencing change will vary among rural labor markets, and analysts will need to examine carefully interregional diversity when considering strategies for assistance. Above all, flexibility to allow for changing circumstances should be built into programs.

Whether or not an area's recent economic history is characterized by growth, stability, stagnation, or decline, there are likely to be people out of work or with low incomes. Some of these people may be chronically disadvantaged, but others may have experienced economic misfortune comparatively recently. If existing programs are unable to help people in both groups, analysts of rural labor markets should be prepared to help policymakers design new strategies.

To be effective, programs for helping resolve problems in rural labor markets should be based on a sound understanding of how recent trends fit into a longer term pattern, on an assessment of the area's strengths and weaknesses for future development, and on an awareness of strategies that have worked elsewhere. This undoubtedly will require analysts to search beyond the confines of their own experiences and academic disciplines. Policies based on a narrow view of problems and their solutions are unlikely to be successful.

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DISCUSSION

Shelley Pendleton [1]

The future of rural America depends partly on its ability to respond to stability, growth, and decline. To do this, we must gather information on how rural labor market areas respond to stable conditions or plan to change or react to changes in population and employment. Making better informed decisions in the future depends on understanding how the alternative reactions and responses work under a variety of rural labor market conditions. These comments will highlight several themes that were addressed in Dr. Kale's paper as well as those emphasized in the discussion. I will conclude with the discussion of a figure which summarizes factors used in researching growth, stability, and decline in rural labor markets.

Historical Context and Patterns of Change

Among the many themes of this paper and discussion, one that stands out pertains to the need to place an area's present experiences with growth, decline, or stability within the broader context of its past experiences. Much of the information available on change comes from case studies that focused on areas experiencing a sudden change, such as a new plant opening or closing. Communities that have experienced similar types of changes are then compared with each other to determine the effects of that occurrence. However, past experiences with change will have affected resources and attitudes, and thus the ability to deal with recent changes. For instance, while, on the surface, two communities may be going through the similar experience of losing a plant, the one with a previous experience with sudden change may deal with the situation very differently from a community whose only past experience with change had been with a slow, long-term expected one (Ludtke, 1978).

In the long run, most labor markets face a variety of types of changes. The resources, expectations, and knowledge of how to best plan for change or react to expected or unexpected changes, are all affected by past experiences with change. Thus, incorporating this information into the study of rural labor markets would clarify why certain actions are or are not taken.

Conceptualization and Measurement of Growth, Decline and Stability

A second theme deals with the need to recognize the difficulties in conceptualizing and measuring growth, stability, and decline. Identifying what it is about a labor market that reflects an important change or a unique period of stability would encourage comparability across studies.

Characteristics of rural labor markets need to be monitored in order to provide a more complete picture of what is occurring in these areas. For instance, unemployment and employment figures may inaccurately portray a rural area's employment situation because of the number of seasonal, part-time and self-employed persons who, in reality, reflect very different patterns of work from consistent, full-time workers. Measures of overemployment and underemployment would add information better reflecting the employment situation of rural workers and be useful to both planners and policymakers in understanding the characteristics of potential employees and available jobs. Unless we use measures to catch the many dimensions of employment status, we may misinterpret what is occurring in an area. (See Sullivan and Clogg, 1985, for further information on the problems with measuring underemployment and alternative dimensions of employment status.)

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Changes in labor markets may result in shifts in the population makeup, due to either natural increases or decreases, or due to migration. For instance, the opening of a new automobile plant in an area may result in the influx of men and families, while the growth in service occupations would most likely result in an increase in women's labor force participation, with few new people moving to the area. This, in turn, could affect the development of other types of services needed for families that have become two-earner families. Conversely, the loss of a plant may result in outmigration from the area or in the upgrading of credentials required for certain jobs due to an oversupply of available, experienced workers. To fully understand what is affected by these changes, and to aid in the planning for such changes, we should continue to measure how labor market performance differs for the various groups, according to characteristics such as age, race, and gender.

Similarly, the industrial and occupational structure in an area needs to be examined. Areas may appear to have similar industrial compositions over time, while in reality there could be occupational differences that result in very different opportunities and benefits for employees and their families. The nature of work itself may be affected by changes in the occupational or industrial structure. For instance, management techniques, maternity leave, overtime, fringe benefits, flex-time, or working at home may indicate changes in a given labor market area that would be missed unless specifically identified.

Another topic for study would be the monitoring of quality of life indicators to study the well-being of individuals and changing conditions in labor markets. Other questions should be addressed in discussing growth, decline, and stability. Given that an area has changed in some way over a period of time, when would this be considered an important change? Similarly, how much time is needed for us to determine the actual effects of a change? Is it appropriate to say that deviations in employment or population from a national average indicate a significant change? Alternatively, is a deviation from a regional or similar area's average the basis for a better comparison? Must a change occur unexpectedly or within a certain time period in order for an area to be considered growing or declining?

Factors Creating Change in Labor Markets

Dr. Kale has emphasized the need to understand the "forces underlying growth, stability, and decline to understand the development and changes occurring." In figure 1, I have identified several factors that affect changes in labor markets that can be included in rural labor market research. These factors are portrayed in three groups: one identifying those factors creating changes; a second group identifying factors to consider in the conceptualization measurement of growth, decline, and stability; and a third group dealing with factors used to indicate responses to change. In discussing the figure, it is important also to mention the implied reciprocal causality between the factors creating change and those indicating responses to change. For instance, the addition of a large employer to an area could result in an immigration of, say, younger, more educated workers, which could in turn make the area more attractive to other employers. For the purposes of this discussion, however, the figure is laid out according to the normal conception of the causal flow.

Following are brief explanations of several of the factors I have listed in column 1 of figure 1, which I see as creating changes in labor markets. Dr. Kale mentions that, in the aggregate, rural areas are becoming diversified in industries. However, specific communities continue to be specialized or dependent on a single industry. West (1978) has shown that areas are differentially affected, depending on the industry that is dominant. For example, he found that growth in manufacturing employment increased median family income, increased labor force participation, reduced unemployment, and reduced inequality, while growth in mining reduced underemployment. In contrast, increases in recreational employment resulted in increased population size, total income, total employment, and per capita income. This demonstrates that, for policymakers, planners, and researchers, it is extremely important to recognize what an area wants to accomplish with a planned change or to recognize what is likely given a specific type of change. What constitutes industrial specialization or diversity should also be addressed in our discussion.

Several other issues were mentioned in Steven Kale's paper which I am grouping, for the sake of brevity, under industries' reactions to the business climate. Particularly for labor market areas that are able to plan for changes, an understanding of how these variables affect an area's attractiveness to potential employers is important. In addition, an understanding of how these factors affect the structure or makeup of the labor market is necessary in providing information about an area's ability to handle change. Included in this group of business climate variables are the exporting of goods, foreign investment and competition, the importance of unions, skill of available labor, structure of businesses, and size and type of ownership (See also Anderson and Barkley, 1982, and Barkley, 1978.)

In addition, one must consider the effects of distance to urban areas, as well as the effects of Federal and local policies and programs. Another issue to consider is the relative attractiveness of the area to individuals, which includes available services, wages, type of environment, and the availability of information.

When conducting this type of research on rural labor market areas, we must be aware of putting values on what we are studying. Growth is often viewed as a very positive situation and decline or stability as a negative situation. These effects may, in the long run or in relation to the indirect effects on other areas, be just the opposite. We must not view a specific occurrence in isolation from the larger system of which it is a part, or without knowledge of its past experiences with change. On a similar note, we must be aware of the inherent biases of the indicators used to explain what is occurring in a market area and not overinterpret on the basis of one type of indicator. Examining the responses to change or stability is imperative if proper decisions are going to be made by policymakers and planners.

Figure 1

Factors Creating Changes In Labor Markets:	Conceptualization and Measurement of:	Labor Market Adapation Seen In
Specialization or diversity of industrial employment	Labor Markets	Unemployment
Industries' reactions to the business climate: ability to continue exporting, foreign investments and competition, importance of taxes, unions, skill of available labor, size, and ownership structure of businesses	Growth, stability, decline -employment changing size of labor force compared with -national averages -averages of similar areas	Underemployment Poverty rates Individual and/or family earnings Population characteristics (age, sex, race)
Distance to urban areas Regional variations Metropolitan vs nonmetropolitan areas (What is rural?)	changing size of labor force in industrial categories, compared with -national averages -averages in similar areas	Migrant character- Occupational structure Quality of life indicators
Changing population (age, sex, race)	-population change in size and/or characteristics	
Past experience with growth, decline, or stability	Data and measurements	
Relative attractiveness of area to individuals: services,wages, environment, and available information		
Public versus local development policies and programs		

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III. Market Linkages — Ties with Metro Areas, the National Economy, and the World Economy

RURAL LABOR MARKET LINKAGES WITH METRO, NATIONAL, AND INTERNATIONAL ECONOMIES: TOWARD A RESEARCH AGENDA

Brady J. Deaton [1],[2]

The purpose of this paper is to analyze the linkages between rural labor markets and metro, national, and international economic forces to: (1) identify major research issues, (2) assess the adequacy of existing data and theories for researching these issues, and (3) assign priorities to the research questions. Accordingly, the paper will be divided into three sections that emphasize each of these objectives. Clearly, these are not mutually exclusive endeavors, so my approach is to become somewhat more specific as the emphasis changes from one section to the next. The first objective is given greater weight in the development of the paper.

Identifying Major Research Issues

Research issues grow from complex interactions among personal values, theoretical perspectives, and social events including major economic phenomena. Accordingly, the first section of the paper establishes the theoretical and personal perspective that I bring to this issue. Then an appraisal is made of the major socioeconomic events which I see confronting rural labor market analysts. An attempt was made to juxtapose selected aspects of labor market research from key economic writing against important socioeconomic trends.

A Personal and Theoretical Perspective

As a comprehensive set of research issues is developed and priorities established, we should be reminded of some of the essential aspects of the research process. Personal values of the researcher play an important role. In my own case, this has led me to be highly skeptical of labor market theory, particularly of the normative conclusions drawn from ostensibly positivistic neoclassical theory. Not surprising then, the easy acceptance by economists of the functional distribution of income according to the marginal value product of labor clashed with the labor theory of value implicitly embedded in my early childhood where a man's (woman's) intrinsic value was based to a significant degree on willingness and ability to do a hard day's work.

I have not been able to accept the negligible economic value placed on my neighbor who spent his days first beating rocks with a sledge hammer in our creekbed road, and then, as he grew older, bottoming chairs with hickory bark. The acceptance of any concept of justice inherent in the high incomes associated with "frivolous" activities in the entertainment and sports arena, not to mention high finance, is partially eased by human capital theory, but then made more difficult by the world of windfall gains and financial arbitrage in international markets which characterize today's world.

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[2] Discussion among workshop participants was useful in revising this paper, particularly the "Discussion" of Molly Killian. I want to thank J. Paxton Marshall, David Kraybill, and Wallace Huffman for their thoughtful comments on an earlier draft.

According to Fusfeld, the combined intellectual forces of Menger (Austrian), Jevons (English), and Walras (French) produced the principle of marginal utility that has served as the battering ram against the labor theory of value, a concept that nevertheless lent itself to wide interpretation for social policy. Unfortunately, marginal utility theory gained ascendancy at a time when political economy was moving away from moral philosophy and a redefined economic science became a cancel spell rationale for "free-wheeling individualism... and the folklore of the self-made individual" (Fusfeld, pp. 73-74). While a causal relationship from the theory to the rationale may be inferred, it need not have been that way.

The neoclassical cancel spell has not easily accommodated the social philosophy essential to public policy formation. Public policy proceeds on the basis of interpretations of constitutional and legal precedents to labor relations and the historical and anthropological antecedents of labor market structure. Recognizing these factors pushes our search for intellectual foundations (at least in my case) toward Veblen, Commons, Polanyi, and Rawls. These writers have helped me come to terms with the apparent paradoxes of more youthful observations, some of the limitations of a narrowly conceived competitive economic model, and the need for eternal vigilance against ideology cloaked in the folds of economic science.

Briefly stated, my analytical focus on rural labor markets is to identify the labor allocation effects of social, technical, and economic changes in order that we may understand their implications for income distribution, poverty, and capital accumulation. Some of these effects may stem indirectly from the reallocation of nonlabor resources. Some degree of success in this inquiry will help us toward the goal of providing a foundation for social and economic policy formulated on the basis of scientifically derived information.

My view of social welfare is that regenerative economic growth can proceed most effectively when institutional processes are designed in a way that guarantees social justice. A Rawlsian perspective on this process argues for policies that elevate the economic status of the most disadvantaged members of society, thereby, reducing the risk of poverty status for any given person born in the future. This view holds important implications for assessing labor markets and prescribing economic and rural development policy.

Identification of Important Social and Economic Trends

The timing of this workshop fortunately, in my opinion, follows the American Agricultural Economics Association's post-conference session on "Issues and Priorities for Agricultural Economists." This gives me the opportunity to draw on some of the ideas presented there and to extend them in ways that relate directly to the formulation of research issues on rural labor markets.

Deaton and Weber identified six trends and other shifts in international policy orientations that have significantly altered the sectoral and spatial organization of rural economies. Here, I hope to extend our thinking on their implications for rural labor market structure and performance. The six trends posited by Deaton and Weber were:

1. Internationalization of the economy,
2. Changing demographic structure,
3. Changing economic structure,
4. Decentralization of government,
5. Deregulation of key economic sectors, and
6. Evolving conception of justice and human rights.

Moreover, the authors argued that these trends must be interpreted within a contemporary policy setting wherein private power is being centralized and marshaled for national political goals, which extend into the international arena, a process they labeled as "neomercantilism." Rural labor markets are being redefined in this process, and the changes pose serious analytical and policy difficulties. Both the overvalued U.S. dollar and the continuing protectionism of current policy shifts the burden of economic adjustment onto the export industries. Accordingly, rural-based firms and employees of agriculture and natural resource industries appear to be bearing an inordinate share of the costs of protectionism.

These ideas provide a starting point for identifying important research issues related to the performance and structure of rural labor markets. The principal aspects of the above six points which bear on rural labor markets will be subsumed under three broader headings: (1) structural adjustments, (2) changing demographic structure, and (3) evolving conception of justice. I will devote most of my attention to the first of these topics, structural adjustments, and will touch only briefly on the latter two.

Structural Adjustments

A range of concerns stem from structural adjustments in the economy driven by: (1) the internationalization of the economy, (2) technological change, and (3) growing farm/nonfarm interdependence. Each of these forces have altered rural labor market conditions. I will briefly call attention to the principal issues that I see emerging from each. In doing so, it will be useful to draw on three interdependent factors cited by Martin and Rochin that affect labor relationships in a dynamic economy. In this context, structural changes may have the following effects:

1. The institutions for matching labor supply and demand may change in concert with the structure of industry and the composition of the labor force. These factors combine and interact to govern labor market operations.
2. Individual propensities and institutional traditions create "stickiness" in the functioning of the labor market. Consequently, different labor market relationships evolve as the power balance and bargaining position change between industry and workers and among competing groups of industries and workers.
3. Public policies influence labor market structure and performance both directly and indirectly. In addition to a legally defined framework for specific duties, responsibilities, and permissible activities, broader policies, such as taxing and spending, social welfare, and immigration policies, shape the outcomes of rural labor market performance.

Internationalization. The paradox of neomercantilism is that the U.S. economy has become more open and, therefore, vulnerable internally while selected protectionist policies are maintained externally. Foreign direct investment in the U.S. has increased over five-fold since 1974, from $25 billion to $135 billion in 1983. Foreign investment in manufacturing, particularly in chemicals and food-related industries, makes up roughly a third of the total. But banking and wholesale and retail trades have been growing sectors for foreign investors. I have seen no information on the rural-urban composition of these investments. Undoubtedly, these investments are having significant influences on the rural labor markets.

The product-factor price equalization theorem underlies comparative advantage arguments for the mutual benefits among countries (or regions), to be derived from free trade. However, a number of problems may be cited that draw into question the relative effects of a more open economy on rural labor markets. Addressing some of these problems will give us insight into research priorities. The social forces and/or political ideology that have led to a realignment of the domestic economy along neomercantilist lines place a premium on the economic efficiency of rural labor market functioning and tend to diminish public attention given to structural features that address broader social concerns. An example of this growing imbalance, in my judgment, is the current attempts to provide adjustment assistance to workers in shoe factories in the United States who are losing their jobs to foreign competition. According to recent press reports, public welfare programs were so dismantled that Secretary of Labor, William Brock, simply could not find adequate financial support to address these needs of the workers.

First, commodity and factor trade impediments may lead to serious resource misallocation both among countries and within countries. The latter is our principal concern, but the former has serious implications for immigration policies and for the use of foreign laborers on U.S. farms. Wallace Huffman (1982) makes explicit use of the product-factor price equalization theorem to point out that uninhibited commodity trade results in a tendency toward inter-country factor-price equalization, even with factor immobility. Product and factor mobility are substitute sources for equalizing factor prices, say labor. In the protectionist economic environment toward which we appear to be moving, it is essential that the costs and benefits of alternative protectionist policies to the rural labor market be carefully assessed. Relatively little attention has been given to this issue.

Commodity trade impediments stimulate inter-country factor movements in order to equalize factor prices. Floystad argues that international trade lowers the real wage rate for trading sectors and the ratio of the real wage rate to the rate of return on capital, if labor is the scarce factor. Given the substantial capital inflows into the United States in recent years, the potential for high rates of capital return as compared to the rates of real wage growth has undoubtedly been a major attraction to foreign investors. Relatively free commodity and capital flows have been important in this process.

These international forces place adjustment burdens on interregional labor markets within the United States. Their outcome depends on the sectoral composition of each region and the relative incidence of labor supplied by immigration. I have seen relatively little theoretical or empirical research to guide our inquiry on this matter. The writing of Thirlwall provides a framework for assessing some of these issues. 3/ His emphasis on the cumulative effects of factor movements on regional growth is particularly appropriate. I will return to this "cumulative causation" perspective later in the paper.

A well-defined general equilibrium approach may be needed in order to clearly specify sectoral labor demand and factor substitution. Bowles (1984) and Psacharopoulis and Hinchcliffe (1972) developed methods for examining elasticities of substitution that complement the work of Schuh (1962) and Gardner (1972). These micro approaches need to be integrated into a well-defined macro-economic model (Schuh and Orden).

A second important matter is the rate of market adjustment set in motion by international factors. The efficiency and magnitude of international capital flows may create economic dislocations that are more abrupt than in the past. Hence, from a policy perspective a premium is placed on the need for increasing human capital stock that can absorb the disruptive aspects of sudden exogenous shocks to the rural labor markets. To my knowledge, research has not yet established the sectoral and regional implications of these capital flows, much less the role of broad educational training and job specific skills in mitigating both personal and social costs of job dislocations that stem from specific macroeconomic policies and financial market rules that alter international capital flows.

Some creative work is needed that draws on the contributions of Coyte and others who have analyzed sorting mechanisms in labor markets and the role that specific human capital plays in altering probationary contracts in labor markets. Both formal and nonformal work arrangements may be affected by international economic forces. For example, have quit rates been altered by the growing uncertainties in the rural labor market? And, are training programs appropriately matched to the laborers' needs for upward mobility? The employer's share of earnings may rise under conditions that create greater risk aversion on the part of the workers in the absence of enhanced skill training. The distributional consequences of these economic adjustments could be quite important in the long run.

Parsons provided a general approach for studying quit and layoff behavior in the labor force. The basic theory underlying economists' concern for quit and layoff rate analysis should be understood. The quit rate reflects the voluntary departure of workers from a given job. Most likely, quit rates will increase if workers have alternatives, new job opportunities and/or if they have gained new skills, either on the job or through training programs. Layoff rates reflect the managers' control over the work force and will vary as the demand for industry's product varies, as new technologies displace workers with inappropriate skills, and as bargaining power changes between workers and management.

These rates are influenced by the amount of training and education gained by the workers and by the changing composition of the job market, particularly within commuting distance. Moreover, management is more likely to offer training in specific and general skills to younger workers, especially when other competitive jobs are unavailable. Clearly, the decision environment is complex and risky. Acquah and Hushak applied the model to study quit and

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3/ David Kraybill called my attention to the particular relevance of this article by Thirlwall.

layoff behavior among manufacturing plants in southeast Ohio. They found a negative correlation between workers over 55 years of age and firm-financed specific training in their layoff equation, supporting theoretical expectations that specific training is most generally directed toward younger workers. Similarly, they found a positive, significant coefficient of education in the quit equation and a positive relationship between rate of quits and workers over 55 years of age. The authors argue that these relationships indicate that workers have not acquired significant worker-financed specific training, particularly because of the unexpected greater mobility of older workers. Within the region, firms could cut back on employment without losing firm-specific human capital. Costs of adjusting to alternative jobs were not large for the workers in this area.

This approach holds promise for understanding both relatively isolated rural labor markets and those that are more open to change and becoming intertwined with international markets. Unfortunately, such research has not captured the imagination of most agricultural economists. I believe it should be given greater emphasis, particularly the distributional consequences of layoff and quit rates as we move into an era of greater economic uncertainty.

The Southern Growth Policies Board (SGPB), a policy research arm of the Southern Governors' Association, has called attention to research needs in this area. A recent position paper argues that: "increasing foreign ownership and control of Southern businesses will alter traditional responses to import substitution...

> Industries will become less unified in demands for protection, and state governments will be faced with the prospect of exercising a greater role in setting national trade policy or forfeit control of its impact on their economy." (SGPB, p. 12).

The principal impacts lie in the changing opportunities for rural workers and for public services in their communities, their tax bases, and their bargaining power. The SGPB points out that 24 percent of the $223 billion of foreign assets (1982) and 2.4 million employees in foreign-owned businesses are in the South (SGPB, p. 13). Undoubtedly, this increased openness will place a premium on the use of resources that are relatively cheaper in the United States.

A history of public education and extensive vocational education programs in the United States guarantees some minimum skill level in the work force that seems to be proving attractive to foreign capital. Higher skilled labor is able to attract capital from the international market into these areas of highest skill demands. In this sense, investments in human capital provide one of the strongest incentives for industrial attraction for any region. In the absence of restrictive policies, the process works in the international market as well as in the domestic economy. When the next chapter on international capital mobility is written, my hypothesis is that human capital will be a significant factor influencing the pattern of investments in this and other countries.

Two additional aspects of these changes hold important research implications. First, the personnel policies, training programs, and incentive systems being applied in foreign-owned firms may revolutionize our understanding of labor relations. [4] Whether union leadership will be able to effectively involve workers under the changing environment must be one of their chief concerns. Cultural differences and varying degrees of worker involvement in management decisions will alter our understanding of property rights in occupations and positions (Commons). Research into this topic would be extremely valuable in helping understand changing productivity and the concept of the post-industrial worker.

A second issue is the changing political economy of communities that are heavily affected by international investments. The SGPB suggests that State governments have new incentives to become involved in setting national trade policies. The evidence on this seems overwhelmingly supportive of this view. Basically, we are experiencing a new pattern of social control over the market economy (Polanyi).

At the same time, Gruchy argues that the post-OPEC concentration of energy and power has not been seriously analyzed. He views "workable competition" arguments as perpetuation of a myth designed to enable large corporations to continue to exercise economic and political power behind a competitive facade. A similar view of the "information society" is expressed by Melody. He argues that the oligopolistic character of most national and global markets will be revealed more clearly under an open, internationally oriented economy.

These views suggest that the importance of the international economy may be in revealing the "true" nature of capital organization, decisionmaking, and power. Oligopolistic models reveal that relatively less labor may be employed in the oligopolistic sector, but wage rates will still be competitively determined and will be equal across sectors, ceteris paribus. However, labor market adjustments across sectors and space will be affected. We do not have a clear understanding of these issues at this time.

The changing nature of federalism, a concurrent if not interrelated movement, provides an environment for a fundamental reassessment of power and authority (Jequier). The implications for the workers' share of earnings under changing power balances would appear to be a fruitful topic for several disciplines and may provide insight into the distribution of wealth and income which were not uncovered by the neoclassical approach used by Williamson and Lindert to study the history of income to wealth distribution in the United States. Their focus on employee wages as the principal explanatory factor shaping the size distribution of income may not be substantiated under the new economic environment. While international capital and goods flows are as old as economic history, their unfettered impacts have never been so pronounced nor concurrent with shifts toward decentralized governmental authority and financial control. Local governments have been left in a quandary about their future prospects.

The mix of rules of the workplace, government responses to decentralization, varying approaches to human capital development, and the consequences of these changes for public infrastructure will alter worker productivity in unseen ways. Identifying the interaction of factors that contribute to labor productivity should be a high-priority research item. Labor productivity is an important conceptual issue in any theoretical framework, but takes on increased importance in the disequilibrium perspective of Kaldor and Thirlwall, a topic to which I will devote more attention in a later section.

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[4] I am indebted to Bernal Green, ERS-USDA, for first calling my attention to the importance of this issue several years ago. His insight was well ahead of either broad public attention or empirical research on worker-employer relations in foreign-owned and managed firms in the United States.

Technological Change. The impacts of technological change penetrate more rapidly and deeply into rural labor markets today than at anytime in the past. Enhanced communications networks and deregulations of key economic sectors expose rural areas to exogenous forces. The extent of this exposure is now due principally to the Federal Government, though State governments appear to be initiating policies to reestablish a degree of public control over State economic affairs. Uneven application of State policies may only further distort the resource allocation process. Rural labor markets are likely to be the involuntary, residual claimant on the costs imposed by these policies.

The relationships of technological change to wage rates, labor demand, factor proportions, and social/psychological aspects of labor productivity, work intensity, and satisfaction provide unlimited research opportunities.[5] The nature of technical change is varied and often subtle, points that tend to get lost in the "megatrend" nomenclature of which we are all willing victims. Glen Johnson provides a summary of some of the important sources of technological change currently being experienced by the agricultural sector. These include advances in cellular molecular biology (genetic engineering), electronic developments for sensors and managerial control of production and marketing processes, agricultural engineering advances, and chemical and biological innovations (Johnson, pp. 13-16).

The point being made is that applications of new knowledge are quite pervasive. The older, traditionally low-wage industries have discovered "high-tech" advances that lower production costs. Chemical processing industries and textile factories have a leading-technology edge that enables innovative plants to stay ahead of foreign competition and diminishes the incentive to move production abroad into low-wage economies.

We have seen very rapid adjustments take place in wage expectations. Traditionally high-wage industries such as steel and autos now face serious adjustments in wages. Workers already dismissed from those sectors face significantly reduced wages in the growing service and information sectors of the economy. The sectoral implications of these changes for worker attitudes, risk perceptions, job attachment, and training should be carefully appraised.

The geographic impacts of technological change may be pronounced. Given the psychic differentials between many urban and rural areas (Deaton, Morgan, and Anschel; Hoch), more rapid migration away from urban centers would be shifts of both firms and people may be realized in more subtle and complex moves among remote counties, interstate corridor counties, urban fringe and expected *ceteris paribus*. This may be too oversimplified as the geographic urban core location's of economic constellations (Rosenfeld and others). The Loschian framework has diminishing appeal as a theoretical framework for analysis as communication and transportation systems become more efficient. Yet, the findings of Rosenfeld and others point to space and/or agglomeration economies as factors of continuing importance. While space has been conquered to some degree, human capital and the cumulative effect of technology and wage changes have become even greater research concerns in my opinion.

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[5] An excellent exposition of the behavioral and social science research knowledge on productivity is contained in the collection of articles recently edited by Brief (1984).

As the labor market has become more specialized, it appears to have become more difficult for high-wage skills to move laterally into other high-wage industries. The potential for a very substantial drop in earnings for a high-wage worker has increased. The path up is narrow and steep; a step to the side may result in an uncontrolled fall downward. A safety net has not been constructed.

Research by Psacharopoulos and Hinchcliffe reveal that the elasticity of factor substitution between labor and other inputs is greater at lower levels of education. As the ratio of capital to other inputs increase, a wider differential emerges between the earnings of secondary education graduates and those of workers who have higher levels of education. However, if lateral moves are impeded by specific job skills that match a specific mix of specialized machinery, workers may not have the flexibility to move into other lines of work with earnings potential near their current levels. In other words, less flexibility and greater risk may be associated with more specialized human capital.

Rural labor market analyses cannot and should not be divorced from assessments of the interdependency among changes in technology, institutions, human capacity, and biophysical capital (Johnson). All have important bearings on labor productivity in the process of economic growth. As Johnson observed in a different context, "it is more important to get together packages of the four in appropriate proportions than it is to spend time trying to estimate their separate contributions" (p. 18). Labor market analysts can take a lesson in this regard. Identifying appropriate packages of factors that contribute to productivity and social well-being should be the objective of labor market researchers. In addition, analyses of changing factor shares under significantly changing technological conditions could yield insight into wealth and income distributions.

Farm/Nonfarm Interdependence. Rather than being a major driving force for labor market changes, this area represents a coming together of diffuse social and economic forces driven by technical change, transportation and communication advances, and the improved social environment of many rural communities.

A little more than 10 years ago, Cochrane called for a new and enlarged concept of the U.S. Department of Agriculture 6/ that included as one of its

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6/ Cochrane's invited address to the 1974 meeting of the American Association of Agricultural Economics also proposed a new name for a modified USDA to be called the Department of Food, Agriculture and Rural Welfare. A name which appears to recognize the public role of promoting cheap food for domestic and foreign consumers as well as strengthening the agricultural industry and promoting the well-being of rural people.

three principal objectives "the promotion of rural economic development and the improvement of rural welfare" (Cochrane, p. 996). He was particularly concerned about the poor quality of primary and secondary education in rural areas and, in the same report, called for a coordinated human resource policy that included programs in five areas: (1) education, (2) health care, (3) worker benefits and protection, (4) housing, and (5) community recreational service (p. 994).

Although his prescriptions were made on the presumption of demand pressures and resource scarcity in agriculture, they seem even more relevant under today's food surplus and the adjustment problems confronting agriculture and rural communities. In spite of well-known adjustment processes associated with the technological treadmills of a competitive agricultural system, it is only recently that the public appears to recognize the important interrelationships linking the farm and nonfarm sectors of the rural economy. The depression syndrome apparent in the Midwest has captured the attention of researchers as well as entertainers. 7/

Huffman (1977) summarized the general growth context within which farm labor flows can be described. He pointed to three sources of adjustment:

1. Families may completely sever their farm sector ties by shifting their labor completely to the nonfarm sector. This may or may not be associated with a family move to another living environment.
2. As children come of age they may leave agriculture while parents continue farming until retirement.
3. Workers and families may stay on the farm and one or more family members may take nonfarm jobs while they and others work full and parttime on the farm. Multiple job holding may occur for one or more family members. (Huffman, p. 1054)

These adjustments in the agricultural sector are common elements of economic growth. This contribution to general economic development has been well documented. Interactions between farm and nonfarm sectors today are more complicated than have generally been recognized and hold important implications for rural welfare, public policy, and population settlement patterns. The relatively rapid growth in rural manufacturing employment and continued infrastructure development in rural areas suggest that further analytical attention be given to this issue (Deavers and Brown, 1984).

One view of the interrelationship between the farm and nonfarm labor markets is that the farm labor market serves as a residual catch-all when nonfarm work is unavailable. Mamer cites work by Fuller and Van Vuuren to support his argument that the farm labor market is a salvage labor market in which farmworkers face increased competition from nonfarmworkers in cyclical troughs. This view argues that an asymmetry exists with more workers moving from nonfarmwork to farmwork than vice versa.

Mamer's argument places a real burden on analysts. If agriculture represents an open, ready-access market for labor that has essentially zero salvage value, then the burdens of adjustment fall disproportionately on the rural farmworker. Under these circumstances, increased welfare for rural

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7/ The Farm Aid benefits held by popular entertainers in September 1985 were patterned after similar performances held for drought victims in sub-Saharan Africa.

workers in agriculture depends on a sufficient growth rate of nonfarm employment.

Adams and Menkhaus explored intersectoral labor market relationships by specifying a simultaneous equation model of the regional demand and supply of hired farm labor. Their aim was to determine the impact of growth in the mining sector on the agricultural hired labor market. Even in the absence of direct substitution between mining and agricultural employment, the authors found relatively higher elasticities of labor supply compared with other studies. This may be partially due to the larger regional definition than was used in earlier studies, particularly that of Schuh. They found a marked increase in the response of supply of agricultural labor to changes in the mining wage. They felt that this result was not due to direct substitution. Rather, their conclusion that agricultural labor is affected by mining appears plausible based on high multiplier effects, not on its direct influence on agricultural labor.

Sumner found a strong positive wage elasticity between farm and nonfarm work. He found that a 10-percent increase in the wage rate offered to farmers implied an 11-percent increase in the hours of work off the farm. While the labor supply could come from an increase in total hours worked, he felt it was most likely due to a reduction in hours of farmwork. This off-farm effect indicates a high degree of flexibility in the use of operator labor on farms. This flexibility suggests that human capital can move between farming and other activities with much lower adjustment costs than that associated with complete entry and exit of the farm family. These factors are important social benefits of the increased interaction of farm and nonfarm labor markets and the reduced job search costs and transportation costs associated with structural changes now occurring in the economy.

Sumner also found that the education of wives is complementary with the farmer's time at either farming or nonwork activities and that the contribution of work hours in either sector to variance of income depends on the underlying uncertainty of relative prices of risk reduction. The greater the gain in expected farm earnings from specialization, especially risky farm enterprises, the greater the gain from using off-farm work to reduce income variance. Thus, his analysis suggests that more onfarm specialization implies a greater incentive for off-farm work as a form of diversification to protect against risk.

Deaton (1985) and Deaton and Weber developed a similar argument that sectoral interdependence within a given local labor market shifts the risk environment for rural households. Briefly stated, their argument is that the growing proportion of farm households, which depend on nonfarm labor earnings, creates reduced income risk for the quasi-farm household. The lower risk may, in turn, stimulate more innovative experimentation on the farming side of the family's portfolio. This argument is based on an expansion of the Just-Silberman classification combined with contributions by Patterson and Marshall and by Tom Johnson. Deaton (1985) hypothesized that greater diversity will emerge both on single farms and among farms in a given geographic region as capital-intensive onfarm technologies are adopted due to relatively higher priced own-household labor.

Note that this argument runs counter to Sumner's in that it points to the availability of off-farm work as the principal force for greater diversification on the farm. We should attempt to determine which way the causal pattern operates because it has major policy implications. Clearly, greater specialization on the farm cannot result in more nonfarm work, unless that nonfarm is available. This places increased importance on *nonfarm job development in rural areas*. Hence, it is the availability of nonfarm work that leads to greater diversification on the farm. Otherwise, the higher risk factor of specialization would diminish the tendency toward specialization except at extremely high rates of return. However, it is not clear whether more risky enterprises would emerge in more specialized enterprise zones rather than areas of diverse enterprises. We could see greater specialization on a given farm, but relatively greater diversification within a community or within a region of the country in areas that were formerly highly specialized.

Advances in knowledge in this area will require a much more thorough and careful assessment of household labor allocation in rural farming areas. Factors underlying risk perceptions must be understood and subsequent behavior observed for capital and labor use in farming. Longitudinal panel studies are essential for understanding this dynamic process. It is an important issue because so much of agricultural and rural development policy is based on assumed relationships that may not be substantiated by research. Labor market responses are shaped by household decisions made under specific conditions. Economic sectors do not respond devoid of the socioeconomic context that is specific to given communities.

Diversification of rural job opportunities appears to hold promise for alleviating rural poverty (West; Kraybill and others; Scott). Most likely these results stem from broad-based changes in the socioeconomic context of target communities and not farm-oriented price and income policies.

Holt argues, for example, that agricultural labor policy appears to have had little impact on the welfare of farmworkers, who continue to compare unfavorably with other occupational groups (pp. 1003-04). He argues that the placement of agricultural labor following the Wagner-Peyser Act resulted in literally millions of seasonal agricultural job placements with relatively little improvement for the conditions of rural farm workers. U.S. agricultural labor policy appears to have done quite well in assuring an adequate supply of labor to agricultural employers and maintaining low cost food for consumers, but has not achieved its objective of improving the employment earnings and working conditions of hired agricultural workers.

Research should be directed toward examining whether or not the increased integration of farm and nonfarm markets stimulated by the internationalization of the economy and structural changes observed earlier in this paper have had any positive effects on farm labor conditions. An intergenerational view of these issues would be useful. With the growing specialization in agriculture, a substantial investment of resources may be required to build the information and institutional base necessary to meet future seasonal, agricultural labor needs (Hold, p. 1005). Diversification of rural economies is not an adequate strategy for meeting labor needs in many regions of the United States.

Section 303 of the Comprehensive Employment Training Act (CETA) of 1973 established a network of job-training and worker-upgrading programs for current and former farmworkers. The program attempted to use vocational training and basic education to move seasonal farmworkers into full-time remunerative nonfarm employment. The size of the rural labor force and the bottomless well of new labor entrants rendered the program relatively ineffective (Holt).

The point of these observations is that structural changes in the economy, which are responsive to policy initiatives, may be more powerful than training and placement programs for ensuring the well-being of the rural labor force. Human capital programs of health and education would encourage greater labor force participation, as would reduced racial, gender, and age discrimination (Scott, Smith, and Rungeling).

Changing Demographic Structure

The penetration by women and minorities into the traditionally white male job world is a force that is transforming the labor market. By 1982, over half (53 percent) of all women of working age were active in the labor market, up from 38 percent two decades ago. Women made up 43 percent of the workforce in 1982, up from 34 percent in 1962. Also, the labor force participation rate of women tends to be cyclical (Thurow).

The uneven incidence of business cycles is widely recognized, though the pattern is probably changing a great deal with the structural changes described in the previous section. An analysis by White, Willis and Banks revealed the demographic consequences in the South. Their analysis of 69,000 employed persons over the 1965-70 and 1970-75 time periods revealed that black females showed the most striking gains during the former period, a period of healthy national economic growth. In contrast, the 1970-75 period was marked by sharp economic fluctuations and a general downturn in the national economy. During this time period, black females as a group experienced little if any wage gains, whereas the wages of white male workers continued to grow.

The post-1980 wage deceleration experienced in the economy is partly due to a labor force growth rate roughly half of the expected value (Vroman). [8] Consequently, the impact of future growth on lowering unemployment will be considerably less than expected due to the slack in the labor market. Real wages are procyclical being driven by overtime hours and by job changes. Bils found that a 1-percent reduction in unemployment was associated with a 1.5- to 2.0-percent increase in real wages (p. 684). Neither of these observations bodes well for the unemployed and low-income members of society. The gainers in periods of economic growth are principally those workers who manage to stay in the work force, weathering the downturns and taking advantage of the upturns.

Both increases in female labor force participation and increases in single-parent families and single households create a more fluid labor market. The pace of entry and exit has quickened, making it more difficult to predict the macroeconomic consequences of fiscal and monetary policies and greatly reducing the reliability of local economic impact analyses (Smith).

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[8] Vroman notes that the labor force growth rate of 0.9 percent between the fourth quarter, 1982, and the fourth quarter, 1983 was about half the expected rate.

The rural labor force is aging disproportionately compared with urban workers due to such factors as: (1) greater life expectancy, (2) better health, (3) greater mobility of the elderly, (4) improved amenities in rural areas, and (5) changes in family structures, particularly less dependence of the elderly on their children.

The elderly have brought additional human capital and financial flows into rural communities. Their wisdom provides leadership and concern for improved public services. Transfer payments from public and private retirement funds and investment incomes are both growing in rural areas. Between 1962 and 1982, transfer payments nearly doubled as a percent of personal income (7.7 to 14.6 percent). Investment incomes grew from 13.5 to 18.8 percent (Deaton and Weber, p. 4).

The labor force participation rate of the elderly is declining in the post-1980 period. Whether this is by choice or design is not clear. Age discrimination may be one factor. The need for fresh injections of human skills may be another reason. Wolozin cites a number of corporate, union, and Governmental policies as the principal problem areas of the elderly worker. Research should be encouraged to investigate the relationships of changes in the rural elderly's work force participation and structural adjustments that stem from international trade, technological change, and agricultural adjustments.

As the rates of poverty grow in both rural and urban areas, its demographic incidence should be monitored as a potential indicator of important policy needs. The stickiness of labor market adjustments combined with rapid human capital depreciation are problems that have been accentuated by the current economic climate.

Evolving Conception of Justice

Rural labor markets are significantly affected by changes in broader society norms because they are small and lack the resilience of larger urban labor markets. Thus, as norms change and become embodied in legal institutions, markets must adjust to new rules. Neoclassical economics becomes an essential tool principally in pointing to the incentives that are brought into play as markets adjust to the changing rules. It does little, however, to point toward what rules may change and even less to when rules are likely to change.

Major legislative initiatives such as those associated with civil rights, school finance, OSHA, EPA, and a myriad of labor relations acts have significant consequences for labor market interactions, particularly due to their uneven spatial incidence. Unique demographic factors, job mixes, and cultural characteristics ensure that rural areas will continue to be unevenly affected by such changes. These observations will be extended in the next section of this paper where alternative theories are assessed.

Theoretical Bases And Empirical Issues In Rural Labor Market Analysis

Neoclassical theory continues to provide a principal source of analytical clarity to labor market analysis. In spite of theoretical assumptions, which seem at times to be totally inappropriate, it provides a basis for interpreting general tendencies based on individual incentives toward pecuniary gains. Its strengths lie, on the one hand, in its ability to accommodate various externalities (social, pecuniary, and nonpecuniary) and modifications of underlying assumptions. On the other hand, its critics have been fragmented and unable to sustain a cohesive and cummulative alternative world view. From a scientific standpoint, a wide range of alternative theoretical approaches and methodological stances are desirable and should be supported and encouraged, consistent with professional autonomy and available resources.

A recent assessment of labor market theory by Chamberlain, Cullen and Lewin illustrates the strength of the competitive labor market approach. The authors point out that wage rates can be interpreted to include working conditions and other nonpecuniary benefits, as well as pay and fringe benefits, "for competitive theory recognizes that it is not simply the hourly rate or monthly salary that dictates a worker's choice of jobs or movement between jobs" (p. 318). The goal is to "predict central behavorial tendencies" not to precisely describe actual conditions in the labor market. This approach places neoclassical theory in a very robust light.

The range of forces currently buffeting the U.S. economy create labor market adjustments in response to synergistic stimuli. While the competitive theory may still be applicable in some settings, its usefulness is diminished by the discontinuous elements of change and the cumulative interaction of factors that lead to economic disequilibrium over a reasonably relevant time frame. I believe this observation holds enormous implications for the future of rural America and for labor market analysts. The theoretical extensions that seem relevant will be discussed under three headings: (1) human capital, within which segmented-labor-market theories are addressed, (2) concepts of justice, and (3) cumulative causation theories driven by wage-related factors.

Human Capital

Classical labor market assumptions include the view that workers are relatively interchangeable and equally efficient and that all job vacancies are filled from the market rather than through internal promotions (Chamberlain and others). The reality of differences among workers by race, gender, work experience, aptitude, personality, and educational attainment must be encompassed by an appropriate theory. Many economists argue that competitive theory handles these modifications quite well and look to human capital theory as the avenue for dealing with such issues. Human capital theory does not encompass discriminatory practices based on race, gender, and age and other social factors creating inequality of opportunity.

It seems plausible to recognize that individuals invest in themselves until the costs of acquiring additional earnings capability just equals the additional earnings to be derived (that is MC = MR). On the other hand, important dimensions of this calculus are bound up in the rate of human capital depreciation, risk, and uncertainty. These factors are determined by rates of technological change, social and political events, unexpected natural occurrences, and the vicissitudes of personal and family life. It is never clear to what extent the competitive model reflects these complexities. A number of empirical difficulties are created by these social conditions and researchers are often not sensitive to their importance as results are interpreted.

The work of Becker and his followers has been impressively supportive of the human capital approach when applied on a fairly general scale. Migration patterns generally respond to wage differentials and job opportunities, and models can be adjusted to reflect the probabilities of periods of unemployment and of alternative jobs. The relative effectiveness of alternative types of training programs have also been analyzed using the human capital approach.

The question before us is whether or not human capital theory and empirical approaches based on the theory help us understand important linkages between rural and urban labor markets and between rural labor markets and the national and international markets. I believe human capital theory takes on increasing importance in helping understand both macroeconomic and microeconomic affairs. At the macro level, Reich argues that human capital improvement is of strategic importance to the future of the U.S. economy. The high degree of integration among components of the world economy requires that resilence and regenerative skills be deeply embedded in the work force. This will enable workers to be creatively involved in "more collaborative, participatory, and egalitarian" production systems (Reich, p. 246).

At the household level, multiple job holders are the rule. Particularly in many rural areas, moving back and forth between and farm and the nonfarm economy of a nearby town or city will become even more pronounced in the future. Reich argues that "business enterprises are rapidly becoming the central mediating structures in American society, replacing geographic communities as the focus of social services and, indeed, social life" (p. 254). This characterization may be overstated, especially for small towns and rural areas. There, the family and the community continue to hold sway to a very important extent, and their influence does not appear to be diminishing.

Some empirical research provides insight into aspects of household behavior. Hughes observed the positive historical association between labor force participation rates of men and real wages and the declining hours of work of females in the labor force. These observations draw into question the positive correlation that others have found between the real wage rates of females and their labor force participation.

The classical work-leisure tradeoff can only be interpreted effectively within a household economic model. The substitution effect between labor and leisure for an individual may exceed the income effect, but the relationships occur within a family environment wherein the marginal effort of the individual is equated with the marginal utility gained by the household. The latter approximates the average utility gained per person in the household. Sen's elaborations on the applicability of such models are relevant to analyses of labor force participation where a multisector labor market is available to families.

Rural labor markets pose relatively greater risk elements in an open economy experiencing significant technological change. This is particularly true if the farm labor market does not provide the employment cushion that it did in earlier periods of history. Within this context, the analyses of specific human capital and general education using quit and layoff rates appear to hold promise. The work of Parsons, and Acquah and Hushak provide excellent starting points. More attention could be given to incorporating risk factors associated with the relative openness of the labor market. Although Weiss found risk differentials relatively unimportant among scientists under "reasonable" degrees of risk aversion, these relationships probably do not hold over a wide range of the work force that has a lower level of human capital stock.

Fay and Medoff used survey data from manufacturing firms to determine that 8 percent more blue-collar labor hours were used in business cycle troughs than were needed. Their data would be interesting to interpret by rural-urban distinctions and by the local composition of industry and other job options that may be available because of commuting. The extent of human capital embodied in surveyed workers relative to potential competitors in their labor market may explain a great deal of the reported "hoarding" of workers over the low points of the business cycle. These relationships deserve a great deal more research attention.

Segmented-Labor-Markets and Other Critiques

Without going into great detail on this issue, it is worth noting that writers on this topic have created one of the stronger attacks on neoclassical theories. Their focus on rigidities, fragmentations, and discontinuities is similar to structural analysis and aspects of institutional economics (Chamberlain and others, p. 336). However, it lacks the fundamental concepts derived from judicial deliberations, and interpretations of customs and legal modifications of rules (Commons, Rawls, Sen). The arguments of theorists writing in this vein appear to have strong roots in a Marxian tradition, which has led researchers into an evaluative mode in contrast to descriptive and predictive uses of theory. 9/

The distinctions commonly used between primary and secondary labor markets appear to be thrown into disarray by current economic events. For example, primary labor markets "feature stable employment, relatively high wages, opportunities for training and advancement, due process in the handling of disputes arising at the workplace, and a high degree of unionization" (Chamberlain and others, p. 336). Clearly, the steel and auto labor markets would, in times past, have met these criteria. Today, one would be hard put to describe them as stable. In addition, large numbers of these workers have found themselves being thrust into lower wage, nonunionized markets, some of which have been in the high-tech, nonunionized computer services world.

On the other side, many secondary labor markets have been quite stable, albeit characterized by low wages. Generations of textile workers have found stable employment in the South. Steady work is a very important value of such industries. Contrary to the charge that employers in secondary labor markets have little incentive to offer on-the-job training programs, empirical research suggests that this is not the case (Acquah and Hushak; Smith, Deaton, and Kelch; Deaton and Landes).

Segmented-labor market theories appear to ignore the fluidity and dynamic changes that have characterized many parts of rural labor markets. Charges such as that of Darity that the human capital conceptualization of

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9/ These terms are being used in the manner described by Sen, p. 284.

productivity ignores the social nature of productivity do not appear to be well founded. To the contrary, human capital theory is based on recognition of the embedded capital that leads to the subsequent production of even greater human capital. This recognition provides the foundation for such arguments as those advanced by Reich.

Concepts of Justice

Labor markets distribute income, provide inputs into production processes, and provide status and recognition to the individual and the family (Sen). These attributes do not always create similar incentive patterns. They certainly generate different demands by society that are not always consistent with the production aspect. Moreover, the latter is influenced by power relationships between employers and employees and by various nonproduction-related discriminatory practices. Even under ideal circumstances the labor market outcomes depend upon initial endowments of wealth and are often not acceptable to society's sense of justice.

The recognition aspect of employment is related to the Marxian idea of alienation and explains many so-called "aberrations" in competitive markets. The reluctance of workers in dualistic economies to take wage employment unless the wages are very high is one example (Sen). The extent to which interpersonal relationships affect rural-urban migration tendencies is another (Deaton, Morgan, and Anschel). The failure to recognize these different aspects of employment can lead to obfuscated conclusions about observed patterns of behavior. These factors are likely to become more important in the future.

Fundamental issues in labor market analysis must contend with the wider social debate on comparable worth as an alternative evaluative system for determining labor's share of earnings. Sen argues that the labor theory of value can be interpreted in descriptive, predictive, or evaluative ways. It is the evaluative use that lends itself to social criticism using such Marxian concepts as "exploitation." In this context, entitlements are related to labor contributions (in terms of 'socially necessary labor'). The concept of labor entitlements also finds expression in such social expressions and political demands as "equal pay for equal work" (Sen, p. 284).

Sen draws on Rawls in an attempt to derive a concept of economic justice from utilitarianism, which he divides into three constituent parts: (1) consequentialism, the rightness of actions can be judged by the goodness of the resultant state of affairs; (2) welfarism, the relative goodness of various states of affairs must be judged by the goodness of individual utilities in each state; (3) sum-ranking, any set of individual utilities must be judged entirely by their sum total (Sen, p. 278). [10]

Drawing on Rawls' difference principle, Sen posits a 'maximin' approach to replace sum-ranking (that is, the goodness of any set of individual utilities must be judged entirely by their sum total) by the "requirement that the goodness of any set of individual utilities must be judged entirely by the value of its least member," that is, by the utility level of the worst-off individual. Moreover, he argues that the maximin approach "has claim to be considered on its own as an appealing moral approach, taking a particular view of 'economic justice'" (Sen, p. 278).

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[10] These definitions are essentially quotes from Sen, p. 278.

Attention is called to these issues because it appears to me that commonly accepted notions of labor entitlements are being placed in jeopardy under current economic trends. The continuing integration of world capital markets, domestic deregulations of financial markets, and farm/nonfarm integration all create an economic environment in which collective bargaining is more difficult. Labor power erodes very rapidly under economic exigencies created by international competition, for example. From this perspective, it is most likely not a coincidence that comparable worth has become more prominent in recent years. Rather, it is a response to the erosion of labor entitlements.

What is the basis of labor entitlements under these circumstances? Commons stated that "the binding power of custom is its security of expectations" (p. 301). Marx expressed significant skepticism about the moral depth of labor entitlements (Sen, p. 285). Adam Smith viewed human capital as the "original foundation of all property, so it is the most sacred and inviolable." Various entitlement theories conflict with each other and their chosen principles are somewhat arbitrary. Yet, the principles will evolve from custom and shape judicial decisions. Labor entitlements stem principally, it appears to me, from human capital and the social conditions under which it is employed. Sen defines entitlements as "the bundles of commodities over any of which a person can establish command, by using the rules of acquirement that govern his circumstances" (p. 30). Under the open economy facing rural communities, rural development can be viewed in Sen's terms, as processes that expand people's entitlements and capabilities enjoyed by using them (p. 30). For the laborer, attention must be given to an "entrepreneurial" view of human capital as protection against market uncertainty.

This may be only a partial answer, because it does not deal with the need for cohesion at the community level. Rawls' doctrine of justice as fairness must, by his own admission, explain the "value of community" if it is to succeed as a social philosophy. He states: "The essential idea is that we want to account for the social values, for the intrinsic good of institutional, community and associative activities, by a conception of justice that in its theoretical basis is individualistic" (Rawls, p. 264). In order to be successful, he recognizes the need of theory to account for the "primary good of self-respect" (Rawls, p. 265). In doing so, it seems that we have come full circle. Our knowledge of labor markets will expand if entitlements are addressed in their fullest complement. That is, labor market theory must answer Marx's concern for alienation and Rawls' concern for the value of community in order to succeed as an individualistically based theory.

Cumulative Causation

The interaction of rural and urban labor markets will be better understood if the concept of entitlements is kept in the forefront. Recognition of the value of rural community and family ties would seem to be principal components of expanded entitlements. Roback's recent analysis added evidence that interregional wage differentials can be largely explained by local amenities. Weber and Deaton spelled out the importance of amenities and psychic differentials as real-wage reducing factors that, in a competitive economy, can lead to cumulative economic growth in rural areas. Combined with infrastructure improvements, including transportation and communication, human capital investments become powerful factors for local change. Relatively greater productivity in rural nodes of growth have emerged driven regionally specific efficiency wages (that is, money wage divided by a productivity index). These factors suggest that the rural renaissance is not a thing of the past.

More important for this topic, the cumulative causation perspective places the broadened view of entitlements in a growth perspective. Briefly stated, entitlement wages would be defined to include the amenities gained by workers from public services, which would include basic safety, kinship and cultural ties, human interaction, and security of expectations for offspring. A range of disciplines should be drawn upon to strengthen our understanding of these issues and this importance to the functioning of labor markets.

These entitlement wages are community and region specific and explain much of the differentials in wages and labor costs of production. While input costs vary significantly across regions, output prices are competitively determined in a national or international market. Starting then from any "equilibrium" position, policies that strengthen the entitlement wage in rural areas will shift the growth processes in favor of rural areas. Growing social costs in urban areas, high urban unemployment, and diseconomies in public services may be major factors that upset the original state of affairs. Government policies that strengthen rural infrastructure and rural human capital investments play a similar role.

A number of these processes have been at work over the past three decades or so, resulting in the historical shifts of population and of manufacturing and service development among regions of the United States and between rural and urban areas. We do not, however, have either a well-developed theoretical context for fully understanding these issues, nor perhaps an adequate data base for pursuing the issue very effectively. A better understanding of rural growth, wealth, and income distribution awaits such work. My impression is that Williamson and Lindert's failure to account for distributional shifts in the post-war period may be largely due to the need for a broadened view of entitlement wages. Their analysis was based strictly on an interpretation of money wages and, with that limitation, essentially does not address many important components of distributional issues.

Bowles, Gordon, and Weisskopf launched an attack on conventional economic models that have failed to explain falling U.S. productivity growth. Such models, they argue, ignore the pace of business innovation, worker motivation, and conflict in the workplace. Their observations are consistent with the views of growth in neomercantilism suggested by Deaton and Weber. Either vantage point suggests that more attention be given to the conditions of the labor force and of social organization that determine relative well-being. The entitlements approach seems to have merit for pursuing the issue analytically.

Information and Data Needs

Since Bonnen's (1975) classifical contribution on information needs in agricultural and rural life, more attention by some researchers has been given to improved measurement. Overall, the profession of agricultural economics has apparently not been significantly moved to improve empirical measurement according to Bonnen's recent views (1985).

Not only have political forces placed less emphasis in the public role in data generation and maintenance, but leadership at the State and university levels has placed less emphasis on broader issues of rural welfare (Bonnen, 1985, p. 29). Both forces tend to diminish the potential for obtaining data upon which labor market issues can be addressed.

Bonnen (1985) critically appraises the political climate and specific actions of certain departments of Government. Here, I want to simply call attention to his depth of concern for an issue in which we all hold a stake. The integration of the world economy places an even greater burden on society to maintain equal access to information, to promote the equalizing of analytical capacity, and to ensure "the public provision of analysis for those who otherwise are disadvantaged in market contests or politics" (Bonnen, p. 29).

Another excellent overview of rural labor market data needs is provided by Moser and other contributors to the Conference "Labor Market Information in Rural Areas." Rural labor market needs at the national, regional, and local levels are addressed. Clearly, an international dimension would be added if the conference were held today. This conference's proceedings also illustrate how much data needs vary by the nature of the party expressing the concern and implicitly illustrates the importance of the public sector role in equalizing access to information.

A significant role emerges for the Economic Research Service of USDA to ensure that appropriate data is generated that enables researchers to focus on the proper issues, some of which are identified in this paper. Some data needs are more obvious than others. Farm labor information, for example, is generally weak (Bonnen, p. 27). Once priorities are sorted out within a longrun policy perspective, attention to the generation and dissemination of information remains a central public responsibility.

Many of the important factors that determine economic productivity such as work incentives, intensity of work effort, and job commitment, are not easily measured by existing data series. Moreover, our ability to manipulate existing data in order to develop economic outcomes based on these measures remains rather rudimentary. Some of our greater insight will continue to be gained from primary data collection efforts that supplement broader data analysis. The key to generating cohesive and cumulative stores of knowledge is to utilize an agreed-upon theoretical framework for addressing important problems with each level of data. Then alternative theories can be brought to bear on the data, with a follow-up study designed to clarify the nature of the problem (that is, the attempt being to distinguish which theory is more appropriate). We need to undertake more research to validate and evaluate previous findings.

Establishing Research Priorities

Priorities for research should depend fundamentally on the needs of society based on perceptions of relative impacts of alternative forces on social well-being. Expertise, financial resources, and the inclination of researchers are other important factors. Rawls and Sen provide a moral basis consistent with utilitarianism for directing our concern toward the poorest segments of society, a position that Nelson recently endorsed. The following priorities for future research are suggested as a means of summarizing the main points raised in this paper:

Priority One: The Impacts of International Factors on the Well-being of Rural Workers

This general topic could be approached from a variety of avenues. Since almost nothing has been done on this topic, a number of alternative approaches should be encouraged. Most literature on this topic addresses sectoral impacts. D.G. Johnson provided an overview of the effects of international trade on agricultural labor markets. His analysis provides a general discussion of nonfarm income across the OECD countries. While useful, it is only a starting point for more indepth attention to this area. Some specific subtopics should include:

- The costs and benefits to workers of alternative protectionist and subsidization policies.
- The effects of alternative management policies in multinational and foreign-owned firms on entry, exits, and internal promotion rates.
- The effects of alternative labor policies in firms facing stiff international competition. Specifically, do alternative rates of return on capital and labor result in changing factor proportions? The elasticities of substitution between capital and labor should be examined. The implications of these changes should be traced out for income and wealth distribution, including the accumulation of human capital.
- The effects of Government decentralization and financial market deregulations on the role and posture of various interest groups toward protectionist policies.
- The influence of community and State government policies and prevailing labor conditions in localities on the international linkages of the local economy. What attracts foreign investors? Is the stock of human skills a strong selling point for states and localities?

Priority Two: The Evolution of Labor Entitlements

This issue is vital because it requires an assessment of the basic foundation of our system of market economy. The highly institutional/legal orientation suggested by the heading should not deter analysts from integrating microeconomic-based, econometric analyses of factor proportions, analyses of specific versus general human capital investments, and regional growth modeling based on different measures of the entitlement concept. The pursuit of growth with equity through future rural/industrial development policies will require a great deal more knowledge about this area than we now possess. A number of specific issues raised in the above discussion will require careful measurement using primary data.

A synthesis is needed of the myriad of economic, sociological, psychological, and philosophical notions embedded in the concept of work. From these ideas, interpretations of wage adjustment and regional growth models could be undertaken. This would provide a basis for future empirical work on the topic of growth with equity. This work would encompass interregional and rural/urban migration and would provide the foundations for clarifying aspects of economic productivity and cumulative causation theory. This is a rich area of inquiry that is both intellectually stimulating and holds important policy implications. Some complex modeling efforts should grow out of such an initiative.

Priority Three: The Role of Human Capital in Labor Adjustments

Human capital must be integrated into each of the above priority areas and is really part and parcel of each. Yet, it encompasses such a wide range of vital issues that the topic deserves further focus. The ability of specific and general human capital investments to build resilience into the labor market should be determined. This would enable private and public decisions to be made about the nature and scope of manpower policies, vocational education, and support for various levels of public education. The effects of human capital will likely vary across types of labor markets. Horan and Tolbert and Ross and Green have suggested alternative ways of classifying the economies of rural areas. The basis of classification will vary by the research question and the policy assumptions underlying the inquiry. These approaches are very useful contributions.

A critical question to be addressed is the rate of human capital depreciation and how it is affected by rates of technological change, aging, and sociocultural factors. The declining labor force participation of the elderly is a disturbing trend at a time when life expectancy and health are both improving. At a time when wisdom and experience are at a premium, an examination should be made of the factors associated with the participation of the elderly in the labor market.

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DISCUSSION

Molly Sizer Killian [1]

Many of us have found it useful to think about rural labor markets as if they are discrete, bounded geographic areas. While these boundaries may be somewhat arbitrarily defined, and although they may change as a labor market grows or declines, most of our primary concerns are with processes that match individuals and jobs within a given, specified geographic area. As was emphasized in the earlier papers, numerous characteristics of these rural areas affect the performance of these markets. However, factors affecting market performance are not limited to these internal characteristics of rural markets. These geographic areas are not isolated from the rest of the world. Furthermore, to understand what goes on within these areas, we must know something about how these areas fit into, or link with, a larger social and economic system.

This discussion of Dr. Deaton's paper focuses on what I see as three of the most critical points (out of a great wealth of ideas) in his paper. First, Deaton begins with, and indeed places a great deal of emphasis on, the observation that this larger social, economic, and political system into which our rural labor markets fit is an international or world system. In other words, just as the economic environment at the national level shapes and is shaped by international patterns and events, so too are rural areas directly and indirectly affected by these international forces.

Secondly, Deaton stresses the point that this system is dynamic in the sense that changes in one part of this system can be associated with fundamental changes in the relationships among the various parts. In other words, the effects of changes in one part of the system, such as monetary policies, are not limited to simply more or less growth, higher or lower incomes, greater or lesser efficiency, or increased or reduced inequality. Instead, what Deaton argues is that a critical implication of these changes can be found in alterations of the basic relationships between employers and employees, between citizens and governments, among businesses, and between markets. For example, Deaton suggests that the alternative management policies found in foreign-owned firms may lead to significant changes in the labor relations (including the mechanisms governing entry, exit, and internal promotions) within domestic firms.

And finally, the third critical point that Deaton makes is that these local labor markets are not homogeneous, that there is considerable diversity to be found among rural areas. Rural labor markets vary substantially in terms of the compositions of industries: some markets have very diverse industrial structures, while others are quite specialized. The labor forces in rural areas also contain a wide range of skills and experiences. As Deaton points out, the demographic structures (for example, age, gender, and racial compositions) in rural areas are undergoing some fairly extensive changes. An additional source of heterogeneity among local areas can be found in the types of household structures and the ways in which these households allocate their time and labor. Thus, for example, the prevalence of single-parent households and/or dual-earner households may vary considerably among rural market areas.

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In his paper, Dr. Deaton shows that these three basic observations taken together have important implications for the workings of rural labor markets in the United States today. He states that the dramatic changes taking place in this larger world system are affecting what goes on within rural labor markets. In addition, the effects of these linkages between rural labor markets and the larger social, economic, and political system vary according to the industrial and human capital compositions of these markets.

The problem that we run into in trying to use these ideas to identify a research agenda or to establish some set of research priorities is that because we are talking about a world system, because this system is dynamic, and because of the heterogeneity within the United States, things quickly become very complex. Everything seems to affect everything else. We need to begin to separate the broad, macroeconomic trends from secular/sectoral changes, and these from the particular characteristics of the firms and households in a given area.

One way to move toward this goal is to conscientiously simplify and clarify the questions that we are asking. Although there is always the risk of oversimplification, mistakes in this direction are easier to identify and correct than are mistakes in the opposite direction. So, taking the risk of oversimplifying what is an extremely complex and rapidly changing world, I have put together a partial inventory of some of the sources and implications of linkages between rural labor markets and the larger world system, a system that is both social and political, as well as economic (fig.1).

This inventory is organized in the following way: On the left-hand side of the figure are listed several sources of the linkages between rural labor markets and the rest of the world. As Deaton has illustrated, these sources, the internationalization of the economy, technological and organizational changes in the production process, and governmental policies have had, and are continuing to have, potentially dramatic effects on the performances of rural labor markets. Possible indicators of rural labor markets performance, including the overall stability, adaptability, and growth of rural labor markets as well as the efficient and equitable distribution of opportunities and incomes within these markets are listed on the right-hand side of the figure. As stated earlier, the effects of the broad macroeconomic and governmental trends on these performance indicators is not expected to be the same in all rural labor markets. There are important structural differences between rural labor markets that are expected to mediate the affects of these linkages on the performances of the markets. Three of these mediating characteristics, the industrial structure, the composition of human capital skills, and the structure of and division of labor within households, are listed in the middle of the figure.

In terms of moving toward a research agenda, this figure can be used in two ways. The first approach involves questions about how to explain differences in the performances of rural labor markets. What factors help explain why some labor markets are growing and others are declining? How can we explain variations in the distribution of earnings or differences in the unemployment rates in rural labor markets? Deaton argues quite persuasively that our explanations of the performance of rural labor markets cannot be limited to the characteristics of these markets; we must

Figure 1: A partial inventory for evaluating linkages between rural labor markets and metro, national, and international economies

Sources of linkages	Mediating characteristics of rural labor markets	Indicators of labor market performances
Internationalization of economy: * increased foreign competition * greater foreign direct investments * investment of domestic capital abroad * increases in legal and illegal immigration (increasingly important as we approach zero population growth)	Diversity/specialization of industrial structure	Stability, adaptability, and growth: * industrial relocations * changes in in- and out-migration * changes in sources of investment capital * changes in types of investment (for example, expansion vs. "rationalization")
Technological/organizational changes: * product-cycle and standardization of production process * cost of energy and changing capital/labor ratios * increasing job specialization * alternative personnel policies, training programs, and incentive systems found in foreign-owned firms	Generalized/specialized human capital skills	Efficiency and equity: * changes in productivity * changes in business failure rates * wage rates by gender, race, resident/migrant status * poverty rates by gender, race, resident/migrant status * unemployment/underemployment by gender, race, resident-migrant status * labor force participation rates by gender, race, resident-migrant status
Governmental policies: * protectionism and subsidization of certain sectors * fiscal and monetary policies * deregulation of financial and transportation sectors	Household structures and the allocation of labor and time	

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examine how the markets are linked with a larger social, economic, and political system. Thus, for example, in explaining wage rates in rural labor markets (column 3), it is not sufficient to say that wage rates are lower in one area than another because one area is dominated by the textile industry and the other is dominated by durable manufacturing (column 2). Rather, as Deaton has shown, the effects of these two industrial sectors on wage rates in rural labor markets are very strongly linked to increased foreign competition, to changes in production processes, and to protectionist policies (column 1).

The second way in which this figure can be used is in evaluating the effects of a specific macroeconomic trend or governmental policy on the overall performance of rural labor markets. For example, Deaton poses an interesting research question regarding the costs and benefits to workers (column 3) of alternative protectionist and subsidization policies (column 1). However, we know that policies to protect the textile industry, for example, will affect the workers (as well as the other residents and business enterprises) in rural labor markets differently depending on: (1) the importance of the manufacture and trade of textiles for the local industrial structure, (2) the generalized or specific character of the workers' skill and work experience, and (3) the strength of the social, economic, and kinship ties of the workers and their households to the area (column 2). Thus, following the organization of figure 1, Deaton's original research question would be expanded to evaluate how the industrial structures, the human capital characteristics, and the household/kinship structures in the rural labor market mediate the effects of these protectionist/subsidization policies on the experiences of workers in rural labor markets.

To summarize, in our efforts to establish a research agenda for the Rural Labor Markets Performance project in Economic Research Service, it is important to remember that our primary focus is: the performance of rural labor markets. The complex, dynamic international system has many implications for many different dimensions of life in the United States. But, by remembering what our principal concern is we can begin to limit the types of questions we need to ask. In addition, it is also of critical importance to remember that discussing and evaluating the effects of this larger system on rural labor market performance is not sufficient. We need to explicitly recognize how these effects are mediated by the existing industrial structure, by the existing labor force characteristics, and by the residents' household structures and/or kinship networks.

IV. Government's Role—

Program and Policy Effects on Rural Labor Markets

RURAL LABOR MARKETS: THE ROLE OF GOVERNMENT

Vernon M. Briggs, Jr. [1]

For over a century, governmental programs and policies have sought to influence both the demand and the supply forces that operate in rural labor markets. As most of these interventions were without precedents, they have often entailed a process of trial and error. Governmental interventions have emerged over the years as the logical response to growing and more complex problems in an increasingly interdependent national and world industrial order. Often economic motivations have served as the prompting force, but it is seldom that both political and social factors have not also been involved. Thus, the role of Government in the economic affairs of rural America at any given time is not an ideological issue as much as it is a pragmatic reaction of a nation seeking to build a just society. It is not surprising, therefore, that governmental involvement in the rural economy has been characterized by spurts of new policies and increased support for ongoing programs followed by periods of retrenchment and reduced commitment. So it is that in the mid-eighties the political cycle has entered a phase when efforts are being made to reduce the role of the Government in the rural and urban economy. But with many old problems still unresolved and a host of new challenges confronting the rural economy, a more activist period may not be far ahead.

Thus, it is not the purpose of this paper to disuss the abstract and irrelevant question as to whether or not there is a role for Government in rural labor markets since this is a fact of modern industrial life. Rather, the purpose is to look critically at the factors that have hindered the conduct of research and sometimes handicapped the formulation of more effective policy interventions into rural labor markets. It will also examine the types of policies and programs that governmental bodies have had available and what lessons the research on the experiences of these efforts has to offer for the future.

With almost a quarter of the Nation's population and a third of its labor force, the economic state of the nonmetropolitan sector is vital to the overall well-being of the Nation. Yet as will be shown, rural America is often treated as an afterthought in the design of labor market indicators and is seldom the exclusive subject of serious labor market research. Without an appreciation of its unique features, national economic policy measures are frequently developed that treat the rural economy as if it were a carbon copy of the larger urban economy. The result has sometimes been, as is the case in the eighties, that the rural economy has been adversely affected by policies that are intended to promote general economic recovery. With regard to policies and programs that have been specifically targeted to rural areas, there has been a disproportionate interest in the problems of the agricultural sector despite the fact that the vast majority of nonmetropolitan counties in the United States are not farm dependent. Thus, even though agriculture remains a critical concern of public policy, it is also the case that some issues in the nonagricultural rural sector have not received the attention they require and deserve. For all of these reasons, a review of the role of Government in nonmetropolitan labor markets should be instructive.

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Definitional Variations and Public Policy

One of the most difficult problems that hampers the conduct of rural labor market research and which limits the usefulness of research findings to the policy formulation process is the lack of definitional agreement on what constitutes the rural sector of the economy. Because it is extremely costly to conduct research that relies on primary data, it is not surprising that most of the limited amount of available rural research is based upon secondary data. But the use of secondary data sources is often confusing. The Bureau of the Census has two separate data series that are most commonly used to define the rural population. In its decennial count of the population, the rural population is defined as those persons living in open country and in small towns of less than 2,500 persons, unless the people are inside the urban fringe of metropolitan areas. Between actual population counts, the Bureau of the Census conducts a monthly sample survey known as the Current Population Survey (CPS). In this survey, the relevant data are classified on the basis of being metropolitan or nonmetropolitan. The metropolitan population consists of all persons living in a Standard Metropolitan Statistical Area (SMSA) of 50,000 persons or more; those living in the county in which an SMSA is located; and those counties tied to an SMSA by daily commuting links. The nonmetropolitan population includes those people living in the counties that remain. "Rural" and "nonmetropolitan" are sometimes used interchangeably. This is misleading because the land areas classified as "nonmetropolitan" greatly exceed the areas classified as "rural." Moreover, it is estimated that about 30 percent of those classified as "rural" reside in open areas within the boundaries of metropolitan areas. In this regard, it has been announced that the CPS will begin in 1986 to publish a new data series with a new rural definition. Rural areas will be defined as those with a population density of less than 1,000 persons per square mile and for towns, those with a population of less than 2,500. As Janet Norwood, the Commissioner of the Bureau of Labor Statistics (BLS) has testified before Congress, "these data will be quite different from the data...for nonmetropolitan areas, which include large urban components" (Norwood, 1985). As this will be a new series, there will be no way to establish past trends with this new definition.

The U.S. Department of Labor (DOL), in turn, defines as rural counties those in which a majority of the people live in places with populations less than 2,500. Because the definition includes people living in places with more than 2,500, the DOL definition is more inclusive than is the definition of the Census Bureau.

The nonmetropolitan definition of rural is often used by the U.S. Department of Health and Human Services in its rural programs. In addition, there are other definitions used by the U.S. Department of Agriculture: some of its programs define rural areas the open country plus places with population of 10,000 or less. All of these are "official" definitions of one Government agency or another. Until the population is uniformly defined, it is very difficult to address the derivative labor market data problems unambiguously from secondary data sources.
Aware of this problem, the National Commission on Employment and Unemployment Statistics argued in 1979 in favor of a consistent definition among Government agencies that collect and publish rural and nonmetropolitan labor market data. To date, there is no sign that this recommendation has been enacted.

Data Concepts and Public Policy

The unemployment rate has become by far the most important of the Nation's economic indicators. It has been referred to as "the most important single statistic published by the Federal Government" (President's Committee to Appraise Employment and Unemployment Statistics, 1962:9). Not only has the unemployment rate become the standard for determining the inadequacy of the demand for labor and the slack utilization of the available labor supply, but, especially since the early seventies, it also has evolved into a role as a primary allocator of Federal funds for human resource development policies (Shiskin, 1977; Norwood, 1977). Thus the "official" unemployment rate has become more than simply a subject of academic interest. It has become a topic of practical importance in both the formulation and the implementation of public policy.

Yet, since the early sixties, there has been growing concern by some labor economists and by many public officials that the unemployment rate itself is an inadequate indicator for understanding the actual condition of local labor markets. Among the research community that has focused upon rural labor markets, the verdict is overwhelming, if not unanimous, that this standard is a very poor measure of both underutilization of the supply of labor and job adequacy in rural areas (see Tweeten, 1978, p. 21; Hathaway, 1972, p. 43; Marshall, 1974, p. 78; Nilsen, 1979, p. 31; Martin, 1977, p. 223; and Rungeling and others, 1977, p. 146). Each has strongly recommended that some measure of subemployment or underemployment would be a far more appropriate descriptor. The reasons given for the need for such measures are complex, but they are derived from the unique features that distinguish the rural labor market from the urban labor market. Many of these differences will be discussed in the next section of this paper.

Discerning Policy Issues

As is the case elsewhere, public policy interventions into rural labor markets are justified on the basis of a perceived need. A decision not to act, called by political scientists as the "power of a nondecision," is also a relevant choice. But in either circumstance, there is a necessity to gather reliable information and to conduct research. Any intervention decision should be based on a careful assessment of what the problem is and what are the expected outcomes of the available policy options. In part, policy options need also to discern whether the expected benefits can be achieved as the result of general economy-wide policies, through specific policies that are tailor-made for the rural sector, or some combination of both.

Industrial Patterns. Historically, it was possible to argue that the pronounced differences in employment and income experiences between urban and rural workers could be explained by the overwhelming domination of agriculture in many rural communities. But the accelerated decline in agricultural employment that has occurred since the end of World War II has effectively eliminated this distinction as a critical feature in most nonmetropolitan communities. Indeed, there is strong evidence that in the aggregate the rural economy is becoming similar to the urban economy. As of the first quarter of 1985, nonmetropolitan areas accounted for 28 percent of total nonagricultural employment or approximately the same as its proportion of the total population. But the growth in the importance of the nonagricultural sector has brought new risks. Namely, the rural labor force has become exposed to the same major structural forces that are buffeting the contemporary urban economy. These include technological change in the workplace, enhanced foreign competition in the sale of products, the dramatic effects of shifting consumer tastes from preferences for goods to services, and the effects of deregulation of some key industries.

In the same vein, the legacy of the rapid decline of agriculture both as a direct source of employment and as an indirect influence on agriculture-related enterprises in local communities has meant more than a loss of employment opportunities. It has also dramatically exposed the human resource deficiencies of many rural workers. Inadequate education and skills and a lack of exposure and information about alternative vocations has often meant prolonged unemployment, labor force withdrawal of secondary workers, and outmigration of persons who would have preferred to remain in rural communities but had to leave. Many of these outmigrants were poorly prepared to find urban jobs. Countless urban employment problems of the past four decades have had rural roots.

Even when new industries do relocate in some rural areas, many bring their trained workers with them and only "skim off" the best qualified in the local labor force (Marshall, 1974). The decision of the General Motors Company (GMC) in 1985 to locate its new Saturn automobile production facilities in Spring Hill, Tennessee, is an example of this practice. When GMC announced the site, it also stated that first choice in hiring will be given to its present or former employees who agree to move to Tennessee. Only afterwards will the local labor force be tapped to fill any openings that remain.

And, lastly, while it is true that agriculture is declining in its employment importance, this decline is an aggregate phenomenon. In 1982, the Department of Agriculture identified 781 counties of 2,493 nonmetropolitan counties (and of 3,140 counties in the United States) that were "farm-dependent." Collectively, these 781 counties were sparsely populated, accounting for only 13 percent of the nonmetropolitan population. Nonetheless, within these counties, agriculture remains the dominant source of both direct employment and related nonagricultural employment (Sinclair, 1985). Many of these "farm dependent" counties are geographically clustered in the Western Corn Belt, the Great Plains States, and in the Black Soil Belt of the Southeast. In these communities, public policies pertaining to agricultural production and to agricultural labor remain of vital consequence. Likewise, in the rural region of the arid Southwest, the use of illegal immigrants as seasonal agricultural workers has become a controversial feature of the efforts in the eighties to reform the Nation's immigration system. As an alternative to reliance on illegal immigrants, pending immigration reform proposals and administrative actions by the Department of Agriculture call either for the creation of a new large-scale foreign worker program or for the expansion of the existing H-2 program for agricultural workers. It would appear, therefore, that employers and public policymakers believe that there are significant regional shortages of temporary agricultural workers despite the fact that overall economic indicators do not suppport such claims. The history of the use of foreign worker programs in agriculture, however, clearly shows that this is a policy option that should not be pursued (Briggs, 1984, ch. 4).

The decline of the agricultural sector of the economy raises a number of vital public policy issues. Government became deeply involved in agricultural production (as it did in nonagricultural sectors) during the depth of the great depression of the thirties. Social welfare as well as production concerns provided the rationale for interventions in order to offset the depressing conditions offered by the free market. In 1935, the number of farms reached its peak at 6.81 million separate enterprises, but by June 1, 1985, the number of farms had decreased to 2.28 million enterprises. The land used for agricultural purposes, however, has not fallen as rapidly so the result is that average size of individual farms has increased. But it remains the case that, in the words of an August 1985 New York Times article, the immediate future for U.S. agriculture is "bleak" (Drabenstott and Duncan, 1985). Among the particular farm issues cited for concern were excess capacity, slow demand growth, increased export competition, declining asset values, and high debt-carrying costs. Although some of these farm problems may be the result of earlier public policies that over time may have become outdated, it is also clear that most of the factors are the result of new forces that transcend events in the agriculture sector itself. Likewise, it is certain that if the decline of agriculture is ignored as a public issue, the nonagricultural sector of both rural and urban America are bound to share the adverse economic consequences as well as the social and political tensions.

As for the nonagricultural sector of the rural economy, there are proportionally fewer jobs in the private sector than in metropolitan areas. Public sector employment is not only more important in its size but also in the quality of the jobs it provides. Public sector jobs are highly sought and, accordingly, public sector job turnover often tends to be lower than in the private sector (Rungeling and others, p. 27). The service industries, which have been the fastest growing sector of the economy, have been expanding in the nonmetropolitan areas as well. But only a quarter of rural employment is in service industries, compared with a third in metropolitan areas. Although manufacturing employs about a fifth of both metropolitan and nonmetropolitan workers, manufacturing in nonmetropolitan areas is much more likely to be in nondurable production, which tends to be low-wage and labor intensive.

The nonmetropolitan labor market has also generated some distinctly different occupational patterns. For example, the incidence of self-employment was almost twice as high in nonmetropolitan areas (12.5 percent) as in metropolitan areas (7 percent) in 1984 (Coltrane, 1985). Farm activity in rural areas accounts for most of the difference between metro and nonmetro areas. Self-employed persons represent an entirely different group than those who work for wages and salaries. Income from self-employment is subject to greater fluctuations and the earnings derived from such work are often low. Also, "unlike wage and salary jobs, unemployment from self-employment activities generally requires that the enterprise fails" (Nilsen, 1979, p. 13).

Casual employment, unpaid family labor, multiple-job holders, and seasonal migratory work are all more common in rural areas than in nonrural areas (Tweeten, 1978, p. 4). As a result, nonmetropolitan areas have a much higher proportion of low-earnings occupations than do metropolitan areas (Nilsen, 1979, p. 22-25).

Population and Employment. As of the first quarter of 1985, the Bureau of Labor Statistics (BLS) reported that the number of persons of labor force age (16 years and older) who live in rural areas totaled 52.2 million persons (Norwood, 1985). This represented 29 percent of the total population of the Nation of labor force age. With regard to the civilian labor force, over 35 million persons (or 31 percent) reside in nonmetropolitan areas.

BLS also noted that the key employment to population ratio of 58.4 percent in nonmetropolitan areas was a full percentage point lower than that of metropolitan areas. All of this difference was accounted for by the lower employment levels by women. Although the general age distribution of rural areas was about the same as for urban areas, there are fewer young people than in urban areas. The proportion of the adult population that is employed in rural areas is considerably less than in nonmetropolitan areas (57 percent versus 61 percent).

With regard to race, about 37 percent of the white population of labor force age live in nonmetropolitan areas. Only about 15 percent of the black population and 10 percent of the Hispanic population of labor force age live in nonmetropolitan areas. Nevertheless, since the percentage of blacks and Hispanics in rural areas is higher than their percentages of the labor force as a whole and since this is not the case for whites, the rural economy is relatively more important for minorities than for whites. There is a pronounced regional distribution of minority workers in rural areas. Almost all rural blacks are in the Southeast while almost all rural Hispanics are in the Southwest. Hence, minority groups in rural areas are more affected by rural geographical employment trends than are whites. In addition, agricultural employment is disproportionately more important to blacks and Hispanics than to whites (Moland, 1981, ch. 12; Tienda, 1981, ch. 13).

Unemployment. As of the first quarter of 1985, the overall unemployment rate in nonmetropolitan areas was higher than in metropolitan areas (8.0 percent versus 7.7 percent). Although historically unemployment rates in rural areas have been officially below those in metropolitan areas, nonmetropolitan unemployment has been higher since the late seventies.

As was discussed earlier, the officially measured unemployment rate has been consistently found to be an inadequate measure of rural labor force availability. Thus, the worsening of official unemployment rates in rural areas relative to urban rates strongly suggests that structural barriers in the rural economy are becoming more severe and they are increasingly dimming the prospects for rural workers to find jobs.

Income. Median family incomes in rural areas are rising but they remain considerably below those of urban families. The 1980 Census showed that median family income in urban areas was $20,623, while it was $17,995 in areas defined as "rural" and $16,592 in areas defined as "nonmetropolitan." The 1980 census reported that 9.6 percent of all families in the Nation had poverty level incomes. The urban rate was 9.2 percent; the rural rate was 10.6 percent; and the nonmetroplitan rate was 12.0 percent. Another way to express the issue is to say that about 38 percent of Nation's poverty population are in nonmetropolitan areas.

Poverty, of course, is not a new issue for rural America but, after declining in the seventies, there is evidence that poverty is once again increasing in both absolute and relative terms in rural America. The Southern Regional Council, for example, has issued a report that shows a dramatic increase in poverty (an increase of 2.5 million people from 1979 to 1983) in its 11-State region (Schmidt, 1985). The increase is largely attributable to the sharp cutbacks in eligibility for social programs by the Federal Government. It appears that it was the people in the rural areas of the South who were the most affected by these cutbacks. The study shows that 36 percent of the 4 million people nationwide who lost eligibility for coverage were from the South. The actual situation is probably even worse since participation in available social programs (for example, unemployment insurance coverage, minimum wage coverage, and disability insurance) for needy persons, has, in the past, been found to be lower in nonmetropolitan areas than in metropolitan areas (Tweeten, 1978, p. 5).

Subemployment and Economic Hardship. For a number of reasons, policymakers and labor market scholars have become increasingly dissatisfied with the usefulness of the official measures of employment and unemployment (Briggs, 1981). The original pressure to develop an index of subemployment began in response to the urban riots of the sixties. The U.S. Department of Labor sought to construct in 1967 a measure that, in addition to unemployment measures, would make allowances for the working poor, the involuntary part-time employed, discouraged workers, and even an estimate of statistical undercount, which is known to be a serious problem in all low-income areas (Manpower Report of the President, 1967, pp. 73-75). No consideration was given at the time to the application of the concept to rural labor markets. This conscious omission occurred despite the fact that the presidential advisory commission on rural poverty concluded its comprehensive study the same year with the observation that "rural poverty is so widespread and so acute, as to be a national disgrace" (President's Advisory Commission on Rural Poverty, p. ix). The obvious explanation is that rural workers suffer from an "audibility gap." They lack a public voice. Their needs at the time that the subemployment index was conceived were as severe as those of urban workers), if not more so. But because rural workers are geographically dispersed and they lack media coverage (relative to what is available to urban workers), it is almost impossible for their needs to be articulated and publicized or for their frustrations to be manifested in ways that are available to urban workers. Hence, no research or policy effort was made to include rural workers in the conceptual design of the index by the Department of Labor.

In 1968, DOL announced that further surveys were underway and suggested that "impoverished rural areas" should also be studied in light of this expanded definitional concept. But with the change in political leadership and philosophy at the Federal level that occurred in late 1968, the official interest in the subject of underemployment concepts was abandoned (Spring, 1972). It has yet to be reviewed by any subsequent presidential administration.

Interest among academicians in the subject of an expanded definitional concept has remained strong (see Miller, 1973, p. 10; Levitan and Taggart, 1973; and Briggs, 1981). In 1973, the passage of the Comprehensive Employment and Training Act (CETA) mandated that DOL develop data that closely resemble those needed to construct a subemployment index. The act also required that its funds be allocated on the basis of local labor market data on unemployment, even though no such local labor market data existed at that time (Norwood, 1977). The Bureau of Labor Statistics (BLS) of DOL was given the responsibility to develop all such data. In 1975, the commissioner of BLS outlined the extreme difficulty encountered in the collection and tabulation of subemployment data (Shiskin, 1975). Because there was no consensus among policymakers, academicians, and the public, the commissioner requested that an independent and impartial review commission be established to examine the definitional issues involved.

Accordingly, in 1976, legislation was enacted that established the National Commission on Employment Statistics (Public Law, 1976). This presidential commission of nine nongovernmental persons was charged to examine the need to develop broader labor market concepts. A specific request was made to study the issue of economic hardship. Sar Levitan was appointed its chairman.

In its final report, the Levitan Commission did find "that the present system falls short of meeting the information needs of labor market analysts" who are concerned with the usefulness of the data for policy development (National Commission on Employment and Unemployment Statistics, 1979, p. 38). The report observed that "unemployment rates in rural areas are consistently low relative to urban areas." Taking specific note of the inordinately high incidence of poverty in nonmetro areas and the general scarcity of jobs relative to metro areas, the commission also mentioned that the problems of worker discouragement, involuntary part-time employment, and the working poor were especially severe in many nonmetropolitan areas. The commission stated that "the diverse circumstances of rural workers and the unique characteristics of rural labor markets" underscore the need for new measures of earnings and income adequacy (p. 97). The commission noted that "economic hardship" may come from low wages among employed persons, unemployment (including partial unemployment due to slack work) among those in the labor force, and limited participation in the labor force by persons who desire more participation. The commission recommended the development of "multiple indicators" of hardship. In its final report, however, the commission rejected the idea of a single composite index of labor market hardship (pp. 59-60 and 71-72). The majority of the commission concluded that "the issues associated with defining labor market hardship reveal the inherent complexity and multidimensional nature of the concept". The commission did recommend that distinct indicators corresponding to various types of hardship be developed and published in an annual hardship report that would separately discuss employed persons earning low wages, unemployment and nonparticipation in the labor force (pp. 63-71). In response to this specific recommendation for a special annual hardship report, the BLS has published such reports beginning in 1982 (Bureau of Labor Statistics, 1982, 1983, and 1984).

It is significant that the commission explicitly recognized the lack of useful labor market indicators for measuring the adequacy of employment for rural workers. It discussed the need for better indicators than simply unemployment. It did recommend "that the rural population be an identifiable population group in indicators of labor market related hardships" (National Commission on Employment and Unemployment Statistics, 1979 p. 97). Unfortunately, but not surprisingly, the aforementioned BLS reports on economic hardship that have been published since 1982 have not included any data breakdown tht identifies rural or nonmetropolitan workers as an "identifiable population group." It is likely that a disproportionate number of those persons identified in these reports as being in need are rural workers but one would never guess that this is the case from reading these reports.

Underemployment. To date, no Federal effort has yet to address one additional indicator of underutilization of labor that is highly pertinent to rural labor markets. It is the case of persons who take jobs--and are thereby counted as being employed--but the jobs are actually below the skill and educational levels that the workers already possess. Such workers are usually earning lower wages than they would earn if they could find jobs for which they are trained. It is this meaning of the term "underemployment" that most noneconomists usually have in mind when they discuss this issue. But, because this phenomenon is not part of the Federal labor market statistical system and because it is a concept that is not easily quantifiable, this type of underemployment is simply ignored as an issue. It is likely in rural areas that this problem is more common than in urban areas. Just because social problems cannot be easily quantified, and, therefore, they are not examined does not mean they are nonexistent or unimportant.

Indicative of the need for such a measure is a 1985 special study done by the State of Nebraska, a predominantly rural State. It conducted a special statewide survey to examine the accuracy and adequacy of official measures of employment and unemployment as well as the extent of underemployment in the State (Nebraska Department of Economic Development, 1985). Aside from the fact that the study found the existing data from the Federal Government to be grossly inadequate, the study sought to obtain a measure of underemployment. It found that 23 percent of those persons who were employed reported that they were working in jobs below their skill levels and had taken the jobs they held only because they were all they could find. Although the report did not give a specific breakdwon of rural versus nonrural experiences, it did note that underemployment was more predominant in nonmetropolitan areas. The Nebraska study was based on a scientifically drawn random sample. The answers to the underemployment question, however, were simply the tabulated responses that the interviewees gave. The interviewees were not probed for details. Nonetheless, the fact that more than one of every five employed Nebraskans felt he or she was working (and being paid) at a job below their capabilities is a serious social comment on job satisfaction. If actually valid, the phenomenon may at least offer a clue as to why official unemployment rates are so controversial in rural areas. Many workers are simply being down-graded to lower skilled jobs and are just taking whatever jobs they can find. Also, it implies that those once employed at the bottom may be forced out of the labor market into the ranks of the discouraged workers.

Types of Governmental Interventions

Essentially, governmental actions to influence rural labor markets fall into five categories: economy-wide stabilization policies, economic development activities, human resource development policies, equal employment opportunity policies, and income support programs. In most instances, rural labor markets are affected by programs and policies developed to meet broad national economic objectives while in some instances the interventions are designed specifically to respond to rural needs. Unfortunately, to the degree that any research is involved in the analysis of the perceived problems or the design of the policy responses, the research is usually based on the manipulation of secondary data collected at the national level (which is heavily weighted by the urban sector) or findings based on primary research conducted on urban labor market behavior. Research based exclusively on rural labor market needs and behavior is scant.

Despite the size and importance of the rural population and labor force, the design of programs and policies for rural labor markets has been severely hampered by the lack of a commitment by the Federal Government to the conduct of exclusive, comprehensive, and ongoing research on policy needs and policy effectiveness in rural areas. Hence, the discussion that follows is based on what appears to be the case, but, frankly stated, the research base is so thin that it is impossible to speak with certainty about what is known or what can be done based on past experience. This paucity of knowledge is itself an indictment of the past and present inadequacies of governmental activities in rural labor markets.

Stabilization Policy

Perhaps nowhere is the problem of lack of concern over the effects of public policy measures on rural labor markets more clearly demonstrated than when it comes to the implementation of economic stabilization policies. These are the monetary and fiscal policy measures that are implemented to combat inflation and unemployment. They are intended to counter the ups and downs of the business cycle.

The effects of the tight money policies of the late seventies and early eighties severely impacted the rural labor market, especially those areas where agriculture was dominate. The fact that interest rates have continued to be high in "real" terms in the mid-eighties is certainly a major explanation for the continuing financial plight of many rural communities. But to make matters worse, the fiscal policy of the eighties can only be described as being disaster to the economic welfare of rural America. The principles of these economic undertakings were set by the Budget Reconciliation Act of 1981 as put forth by the Reagan Administration and enacted by Congress. They have continued to be the basis for national economic policy since that time.

Essentially, the policy contained three elements. The first principle was a 25-percent cut in Federal personal income taxes. The tax cuts, however, were proportional to income. Hence, as there were proportionally more people in lower-income brackets and fewer people with higher income brackets in most rural areas than in most urban areas, the rural economy received substantially less stimulation than did the urban economy. Secondly, on the expenditure side, there were sharp reductions in the expenditures for social programs. Although people in rural areas have had greater difficulty qualifying for many social programs, the disproportionately larger size of the low-income population of rural areas means that these communities were more affected by cutbacks than were most urban areas. Thirdly, also on the expenditure side, there has been the massive buildup in defense expenditures. Undoubtedly some of the additional defense spending will go into a few rural areas, but most of rural America will not be touched. Consequently, the combined effects of these major fiscal policy initiatives in the early eighties have, at best, meant that most rural communities have benefited only marginally and most have not been helped at all. It is also likely that some rural communities have actually been harmed by the combined effects of these undertakings.

One regional study was done by the Tennessee Valley Authority (TVA) of the impact of this economic package. TVA has a service area that includes 201 counties that are either in its watershed or that use its electric power. These counties are located in all or parts of seven States and they are overwhelming rural. The TVA study found that, collectively, the counties in its vast service area received only 17 percent of the economic stimulation received by the Nation from this overall package and it found that a number of areas had actually been negatively affected (Office of Chief Economist of TVA, 1983, pp. S7-8).

Similarly, the aforementioned study by the Southern Regional Council in 1985 also attributed the sharp increase in poverty in its 11-State area to these cutbacks in eligibility for social programs that have occurred since 1981 (Schmidt, 1985). The study estimated that it was the people in the South, in general, and in the rural South, in particular, who were the worst affected by these changes.

Despite the massive scale of these fiscal policy undertakings, little research has been conducted on the impact of these initiatives on the rural sector as a distinct entity. It may be for this reason that the people in many rural communities have had difficulty understanding what all of the talk of an "economic recovery" has been about.

Economic Development

Over the long run, governmental policies to stimulate economic development in rural areas have amassed a record of achievements that rank high on any list of national accomplishments. They have contributed significantly to the pre-eminent role that the United States has attained in the 20th century in world economic affairs. The list of interventions is far too long to discuss in this present format. But because it has become fashionable today to speak only in terms of private sector accomplishments, it is, unfortunately, essential to cite some of the crucial governmental interventions. For unless this theme of joint public-private cooperation is fully recognized as being the positive force that it has previously been, there is the real danger that rural America may fall victim to the false belief that unguided market forces driven by private desires and initiative have been responsible for past achievements and that such a course offers the best hope for future accomplishments. Nothing could be farther from the truth. It is this theme from the past, the positive role that public policy has taken in shaping the economic development of rural America, that needs to be reaffirmed in order that it be continued.

Examples of these major policy interventions certainly must begin with mention of the Homestead Act of 1862. It distributed at, no cost, more than 80 million acres of public land to rural settlers in the 19th century. It was followed the same year by the Morrill Act whereby the Federal Government turned over 17 million acres of public land to State governments to sell under the condition that the proceeds be used to endow agricultural and mechanical arts colleges, popularly called "people's colleges" at the time, in every State. By the eighties, there were 69 such institutions. Aside from their educational missions, these land-grant universities and colleges have provided the research crucible from which many of the new agricultural technologies and methodologies have sprung that have created the agricultural production revolution in this country and the world since the end of World War II. Another landmark example of public policy was the Reclamation Act of 1902 which outlined the long-term development policy for the arid Southwest. Through its subsequent public works authorizations the Act has made possible the use of Federal funds to construct large-scale irrigation and land reclamation projects. The fruits of this far-reaching legislation can be seen in the fact that at the time of its passage the five States of the Southwest had a combined population of about half the size of the city of Chicago, but by 1980 the States accounted for 21 percent of the population of the entire United States. Moreover, those portions of the rural Southwest that have benefited from the irrigation projects have become a veritable cornucopia of agricultural and livestock output. Mention also must be made of the various policy initiatives that have created the Nation's national parks system and that have sought to designate and to protect vast areas as historic national monuments. Beginning in 1864 with the designation of Yosemite Valley in California by President Abraham Lincoln as a federally protected area, the establishment of the first national park at Yellowstone in Wyoming in 1872, and followed by the passage of the Antiquities Act of 1906 (which allows the president to proclaim certain historic areas as national monuments), more than 330 such areas, mostly in rural America, were in existence by the mid-eighties. These designated areas have contributed immensely to the development of recreational and tourist industries in many of these localities. Another relevant piece of legislation was the Tennessee Valley Act of 1933. It represented the greatest hydroelectric project in history up until that time. In harnessing the vast water resources of a mostly rural area covering 40,000 square miles in all or parts of seven States, it has been instrumental to the economic development and industrial diversification of a region that was once one of the most impoverished and forlorn areas of the entire Nation. Obviously, the list could go on and it would include the role of public policy in the areas of rural electrification, highways, railroad right of ways, military base locations, defense testing sites, and public works infrastructure enhancements. It would also, of course, need to mention the vast array of agricultural support programs that have been enacted over the years. These have included agricultural programs to support prices, to limit imports, to subsidize exports, to underwrite the costs of research, and to assist in conservation measures.

The point is that public policy has served a long and positive history as an instrument of rural economic development. By enhancing the economic climate of rural areas, they have significantly contributed to the opportunities for the private sector to flourish. As the demand for labor is derived from the demand for products and services, these policies have contributed directly and indirectly to the generation of employment and the provision of income for rural workers.

It is true, of course, that State governments have also instituted programs and provided infrastructure in their rural sectors that have also assisted in the developmental process. The effectiveness of these undertakings, however, are not well documented largely because they have seldom been the subject of independent research. State initiatives, however, often go beyond merely enhancing the economic climate. They have frequently sought to assist particular private enterprises through tax abatements, subsidized low-interest rates on capital loans, and providing linkages with local education and training institutions to prepare workers for new jobs. These undertakings best serve the Nation when they assist new industries to be created or to expand existing enterprises. But, on the other hand, they do not help when they are linked to attracting firms from one State to another. Unfortunately, such "beggar-thy-neighbor" policies have been far too common in the post-World War II era. There is probably little that can be done to stop such predatory practices, but these undertakings do not deserve praise or support. In the absence of national concern over the necessity to develop an extensive industrial policy for the Nation, the bitter competition between the States to encourage relocation of private enterprises is likely to continue. But while one community and its workers benefit, another community and its workers lose. Hence, the Nation as a whole is no better off.

At the local level, the governmental bodies of most rural communities often lack the resources and the expertise to conduct extensive economic development activities. Some may designate industrial parks, build infrastructure, and provide tax breaks, but others are often financially constrained in the size and scope of such activities. In some cases, however, local community pressures may be an obstacle to rural economic development. Research on southern rural labor markets, for instance, has found that some rural communities are dominated by small elites who only want "certain kinds" of development to take place (Rungeling and others, 1977, pp. 243-4). They fear that local wage structures and employment patterns may be altered, community power structures may be changed, taxes may be increased, or that unions may come. If this is the case, the prospects for economic development in these communities are hindered. Economic development, by definition, implies a commitment to change and to diversity. Economic growth, on the other hand, implies more of what already exists. Too often, rural communities need economic development but are actually seeking economic growth, which may or may not be possible given prevailing industrial trends.

With regard to Federal assistance at the community level, the historic focus in rural areas has been on the needs of agricultural interests and its particular problems. Beginning in 1961, however, a series of legislative initiatives were undertaken by the Federal Government to address the problems of rural areas other than those that pertain directly to agriculture. In general, the legislation has sought to establish a planning process between local governments and between levels of government. In general, these efforts have adopted "a process approach" that has sought to promote growth and development in local communities. Although the details have varied, the initiatives have generally been designed to enhance the access of local communities and local private enterprises to capital markets. Thus, they have involved direct loans, loan guarantees, and subsidized interest rates. Also, some of the programs have included public works projects that have been designed to improve the infrastructure of local communities and some have been linked to the provision of training. Although there were initial efforts to target the limited funds to the "worst, first" communities (those in greatest need), the policy of trying to identify "growth centers", areas with the greatest potential for growth) soon became the preferred procedure. But studies of actual fund allocations indicated that noneconomic factors (of which political considerations were one) often influenced the decisions (Johnson, 1971, p. 277). Lack of local initiative, intercounty squabbling, interagency coordination problems, and poor planning have produced mixed results from these efforts (Chappell, 1972, pp. 93-5). The Rural Development Act of 1972 as well as its successor, the Rural Development Act of 1980 have also attempted to pursue investment oriented strategies to improve both the economy and the living conditions of rural America.

Federal budget reductions in the eighties have eliminated or reduced the scale of many of these undertakings. But aside from the ideological debates over whether the Government should assist the private sector directly or indirectly, the entire experience to date has raised a larger policy dilemma. Namely the number of persons in many rural areas who are qualified for direct employment in the new industries that are attracted to a rural area is often limited. Hence, should public policy attempt to attract industries whose occupational requirements exceed the skill levels of the local labor supply? If so, the result often is that the new enterprises import their skilled workers and only skim the local labor force of its best workers. This leaves most of the original work force unaffected by the development strategy and it may leave some of the original enterprises worse off because they have lost their best workers. It is precisely this fear that sometimes leads to local opposition to the adoption of development programs unless they are restricted to absorb clearly existing labor surpluses. Or conversely, should public policy advocate a human resource develoment strategy that emphasizes training and education but which seeks to prepare people for private sector jobs that are not yet available and which may not materialize in the foreseeable future? More concisely, jobs alone may not help the local labor force if there has been no previous emphasis on education and training, but education and training are of little benefit to the local economy if there are no jobs. Some State governments, for example, South Carolina and Alabama, have attempted to combine these approaches by offering customized training to new or expanding enterprises within their States. But this strategy does require careful planning, extensive coordination, and ongoing funding support by the public agencies to be useful.

Human Resource Development

All research on rural labor markets have pinpointed human resource development as a critical public policy issue (for example, see Marshall, 1974, ch. 4; Rungeling and others, 1977, ch. 7). The decline of the agricultural sector since the end of World War II and the growth of the rural nonagricultural sector has accentuated the problem of matching workers displaced in one industry with emerging opportunities elsewhere. When one contrasts the degree of policy interest that has been generated in the past decade over the several hundred thousand steel and automobile workers displaced from their jobs with the total indifference shown to the 5 million workers displaced from agriculture since the late forties, the inequities in treatment become painfully obvious.

The problem of providing human resources development programs to rural workers is more than simply an issue of neglect of attention. It involves the ways in which most Federal programs are designed and funded.

Since the early sixties, the Federal Government has enacted a series of employment and training programs that have been targeted especially for the economically disadvantaged and the unemployed population. Programmatically, they have involved opportunities for classroom occupational training, on-the-job training, adult basic education, work experience, and, until 1981, public sector job creation. Special versions of these programs were created for subgroups such as youths and welfare recipients. Aside from a small program in the late sixties and early seventies called "Green Thumb" for older rural workers, the only other programs designed exclusively for workers in rural areas have been a host of programs for migrant farmworkers and their families. Despite the fact that migrant workers are only a small fraction of the Nation's agricultural work force, their high national visibility as they move across the Nation has exposed the often deplorable conditions under which they work and live to a large segment of the public. Hence, their plight has become the target of a myriad of assistance programs. In most instances, these endeavors have sought to reduce the hardships associated with the low incomes they receive for their efforts (such as health, nutrition, and housing programs), but some have also sought to attack the basic problems of educational and skill deficiencies. For the remainder of the rural labor force, they have had to find places in the general programs that were passed largely in response to urban problems and which were simply extended in toto to rural areas.

The greatest problem associated with these policy endeavors has been the low scale of their activitiy relative to the universe of need. Given the high incidence of poverty, the large minority populations, and the indications of massive subemployed and underemployed, it would seem that these programs should have been disproportionately present in rural areas. But this has not been the case. Aside from the fact that Federal funding was only sufficient to offer opportunities for a small portion of the eligible population, the funds that were available prior to 1982 were generally allocated on the basis of unemployment rates. The reliance upon this standard meant that urban areas received the lion's share of what was provided. Ironically, as rural unemployment rates have begun to exceed urban rates since the end of the seventies, the available funding for these endeavors has been slashed. Moreover, in 1982, the Job Training Partnership Act (JTPA) replaced previous legislation -- known as the Comprehensive Employment and Training Act of 1973, (CETA). Under JTPA, the formula for the allocation of funds is composed of three equal components. A third of the money is provided according to each State's relative share of low-income persons; a third according to the State's relative share of unemployed persons above 4.5 percent of the labor force; and a third according to the State's relative share of unemployed persons above 6.5 percent of the labor force. In sharp contrast to the CETA system, under JTPA, however, the allocated funds under the formula do not flow automatically to the local areas of need. Rather, they go to the States based on their unemployment and low-income data (National Council on Employment Policy, July 1985). Thus, there is no guarantee that the rural areas of a State will receive a share proportionate to their problems. Because the allocations to each State are based on statewide data, it is possible that economic conditions could improve in the metropolitan areas of the State while they do not (or even get worse) in rural areas. As a result, the State could find its allocation under one or more portions of the formula reduced or eliminated. The fact that nonmetropolitan unemployment has exceeded metropolitan unemployment throughout the eighties and that metropolitan unemployment rates have declined faster than rural rates since 1983 means that this has undoubtedly been the case. Unfortunately, the U.S. Department of Labor has not felt obliged either to build a national data system to collect information on JTPA or to conduct extensive research on program operations as was the case under CETA. The sharp decline in the level of funding under JTPA as well as the nature of its allocation system strongly suggest that JTPA has little to offer rural workers. But it is a subject that begs to be researched.

It should be noted, however, that if underemployment measures are actually developed and if they are included in formulas that allocate funds for Federal programs, there would be a considerable increase in assistance provided under most programs to rural areas. As such increases will probably mean decreases elsewhere, it is likely that there will be immense political opposition to any effort to change the prevailing urban bias that accentuates unemployment as the key allocator (National Governor's Association, 1979, pp. 86-87). Thus, part of the resistance to the wider adoption of economic hardship measures stems not from logic or methodological restraints but from political awareness of what the results might be.

Aside from program mechanics, there have been other more fundamental problems confronting human resource programs in rural areas. Because rural populations are more dispersed than urban populations, it is difficult to provide classroom training programs in convenient areas. In addition, under JTPA the private busines sector, through Private Industry Councils (PIC's), are supposed to play a crucial role in program design. It is less likely in rural areas that the business community is as organized, as committed, or as capabale as in urban areas to perform this crucial role. There has already been concern in urban areas over the commitment and dedication of PIC's, but to date no serious study has even been made of what is happening in rural areas (National Council on Employment Policy, July 1985). Likewise, JTPA was designed to exclude the payment of training stipends for most of its programs. Under CETA, such stipends were usually available. As a consequence, JTPA training has tended to be of short-term duration and it has had difficulty meeting its participation goals for youths. Rural workers in particular need long-term training opportunities that can overcome serious training deficiencies and to prepare them for the better quality jobs which are often the only ones that are available. Likewise, rural youths need quality training since many of them will probably have to leave their local communities to find jobs in metropolitan areas or in growth centers in rural areas. But JTPA does not seem capable of meeting these needs.

The research on other forms of publicly supported training in rural areas is also scant. What is available indicates that formal apprenticeship training is virtually nonexistent and that vocational education in rural communities is also limited in both its size and scope. The vocational education that is offered is too often only vocational agriculture and home economics. Many rural communities are reluctant to establish vocational training programs for occupations that do not exist in their localities. They fear it will only contribute to the outmigration of their youth. As a consequence, the youth tend to leave anyway because there are so few quality jobs locally available, but the youth then find themselves unprepared to compete for better jobs in the areas to which they go. Much more needs to be known about the potential and the reality of vocational education in rural areas before firm policy conclusions can be drawn.

Tragically, the human resource program of the past decade that appears to have been the most successful for rural workers and rural communities is the one that JTPA was designed to eliminate: public service employment (Briggs and others, 1984; Nathan and others, 1981). The job creation programs of the seventies in rural areas were able to provide needed public services that were often nonexistent or insufficiently available, for example, emergency service, teacher aids, senior citizen care, and conservation work. As the jobs were in the public sector, they often provided better wages and more regular employment than those in much of the private sector. Job opportunities were actually created in many rural areas where the shortage of jobs is a notorious problem. Also, these jobs provided an alternative to outmigration for adults who often do not want to leave where they are, and, if they do go, they are often unprepared to find similarly skilled job opportunities. In the meantime, the public service jobs often enhanced the quality of life in rural areas, which improved the possibilities that economic development could subsequently occur. There were also special job creation programs that were available for rural youths (under the Youth Employment and Demonstration Projects Act of 1977) that were especially beneficial. But despite the fact that research on the demonstrated benefits of public service employment was consistently positive, this program tactic fell victim to political rhetoric that was looking for ways to reduce social expenditures (Briggs, 1982). Hence, JTPA is conspicuous by its absence of any direct public sector job creation programs. In many rural areas, the available work force needs jobs more than it does training. Given the types of jobs that presently exist in their localities, training is often not going to help the participants find immediate employment. Job creation programs, however, provide job opportunities, and, in the process, they often serve as a form of on-the-job training from which the participants gain work experience that prepares them for other jobs in either the public or private sector should they later materialize. In the meantime, the worker has a job and the local community benefits from the availability of the work that is provided.

One type of publicly supported training that was initiated in the sixties and which JTPA has continued to support is compatible with rural labor market needs. It is on-the-job training programs (OJT). Linked directly to employment, it is a program whereby the Federal Government subsidizes the costs of a private employer who agrees to hire an unqualified worker. The intention is that the worker will learn enough in the position so that he or she may, within a short period of time, become sufficiently knowledgeable to be retained as a permanent employee without a subsidy. OJT, however, does require careful administration to ensure that the people hired really would only be hired with the subsidy and it does take time to develop the interest of employers. Also, OJT hiring is generally procyclical (that is, employers are willing to participate when times are good but are reluctant to take on and to keep additional workers when times are bad). Nonetheless, since many private employers in rural areas are small businesses, it is believed that OJT offers more potential for successful placements in actual jobs than does classroom training programs which train first and hope that jobs will be available when trainees are.

Another contribution that Government can make to human resource development is the provision of up-to-date labor market information. What types of jobs are increasing and which are not? What does one have to do to prepare for the types of jobs that are growing? And where are both the jobs and the job seekers both in the community and elsewhere? In rural areas, however, these public services are often unavailable or provided only a minimal basis. Budgetary cutbacks in the eighties in the Federal funds that finance the State public employment services (often called the "job service" in many States) have curtailed this mission (National Council on Employment Policy, May 1985). Although the job service in many States has often failed to meet the expectations of its supporters, criticism in the past has usually sought only to improve its operations, not to eliminate or reduce its vital activities. It is true that most job seekers and most employers can find each other without a public intermediary, but not all workers or employers can. Such is especially the case for low-wage industries and low-wage workers or where casual and seasonal work is frequent as is the case in rural areas. A public agency can greatly facilitate the labor market exchange function at the county (or multi-county) level. The public job service also in the past provided a number of other useful labor market functions (recruiting and screening for publicly supported training programs and the provision of labor market information on a local, State, regional and national basis). It seems certain that the reductions in the availability of these public services, if continued, can only hinder rural labor market efficiency in the coming years.

Equal Employment Opportunity

There is one area of human resource policy that has essentially been ignored in rural areas. It is the subject of equal employment opportunity. Removal of the artifical barriers to employment in the workplace and in the practices of institutions that prepare workers for the labor market has been a subject of governmental concern since the early sixties. But the enforcement and monitoring of the associated policies has been essentially an urban phenomenon. As noted earlier, there is a disportionately large minority population in the rural work forces of both the Southeast (of blacks) and the Southwest (of Chicanos). In both regions, overt employment discrimination was a fact of life until governmental policies in the sixties outlawed such practices (Briggs, 1973; Rungeling and others, 1977, pp. 130-5). Likewise, the occupational segregation of women in rural labor is likely to be at least as extensive as in urban areas but the subject of rural employment discrimination has seldom been explicitly studied. In one study using primary data of southern rural labor markets, gender discrimination was found to be a more pervasive and serious problem than was racial discrimination (Rungeling and others, 1977, p. 133). Discrimination was most severe in the case of black women but white women were also seriously affected. Given the lower employment-to-population ratio of women throughout rural America, it is likely that gender discrimination is one explanation for the lower labor force participation rates and high unemployment rates of rural women.

Admittedly, the research on labor market discrimination in rural areas is scant, but this is no reason to believe that the issue is unimportant. With almost a third of the Nation's labor force largely residing in nonmetropolitan areas, it is a subject that demands both more research and at least proportional attention by governmental enforcement agencies. The obligation to reduce discriminatory practices and patterns in employment is one of the most important duties that governmental agencies have. For discrimination has been consistently found to be a disease that the free market system is willing to tolerate. Despite theoretical beliefs that only productivity considerations govern hiring and promotion decisions, this premise was long ago found to be faulty. In urban areas, antidiscrimination enforcement has become an important aspect of public policy. But in rural areas there is no indication that the subject has passed the rhetorical stage.

Income Support Programs

Poverty has long been a disproportionate problem in rural America. Although there has been a long history of public involvement to combat this problem, most of the efforts prior to the sixties dealt with ways to subsidize those in need and those who cannot work. Since the sixties, attempts have been made to find ways to assist the disproportionately large number of the poor who can and do work.

Many, perhaps the majority, of the rural poor are not in the labor force and, therefore, are beyond the purview of this paper. Yet, the few specific studies of rural markets have found a significant number of "working poor" and "near poor" (that is, families with working members but whose total income is within 125 percent of existing poverty levels) who are in the labor force (Rungeling, 1977, ch. 6). This happens because wages are low and because employment opportunities are often irregular in terms of number of weeks worked in a given year. It is also due to such labor market issues as the presence of discouraged workers and involuntary part-time employment, which as previously noted, also appear to be more serious problems in rural than in urban areas.

During the seventies, efforts were made by two different presidential administrations to reform the Nation's outmoded welfare system (Moynihan, 1973; Burke and Burke, 1974; Lynn and Whitman, 1981). President Nixon was able to secure passage of a part of his reform proposal. Namely, the Supplemental Security Income (SSI) program was enacted on January 1, 1974. SSI created a uniform Federal income guarantee that applied nationwide for the aged, blind, and disabled. SSI replaced a patch-work of contradictory and inconsistent State-administered programs for these target populations. The SSI program is the first national cash-income guarantee program to exist in the United States. But, the largest and most important part of the reform movement was a section that would have also federalized the Aid for Families with Dependent Children (AFDC). Unfortunately, this companion reform measure was deleted at the last moment when it became involved in a protracted series of political maneuvers in the U.S. Senate. Had it passed, the existing AFDC system would have also been federalized and the Nation would have had a federally guaranteed system of uniform benefits and coverage for poor families. It would have replaced, just as SSI did, the prevailing patch-work pattern of contradictory and unequal benefits that still exist in the Nation's 54 different political jurisdictions responsible for welfare administration. Eligibility would have been based solely on the need for income and the same standards would have applied nationwide. The working poor (working fathers and nonwelfare mothers) would have been included as would many of the families of the "near poor" who work. In over half of the States, unemployed fathers would also have become eligible, for the first time, for a cash supplement to support their families. In all likelihood, it would have been families in the rural sector of the economy who would have disproportionately benefited from the federalization of this program. Later President Jimmy Carter in 1977 tried to complete this reform drive by doing the same thing; to federalize AFDC and to create a uniform family assistance program, but his efforts also proved unsuccessful when they, too, encountered stiff legislative resistance. As a consequence, this gaping hole in the Nation's social insurance system remains to be closed.

The absence of welfare reform is undoubtly one factor that continues to explain the high incidence of working poor and near poor in rural areas. Welfare reform will not eliminate either of these problems, but it could reduce the incidence of poverty as well as the magnitude of hardship that continues to envelop the lives of many rural workers and their families. It is a role that governmental policies and programs urgently need to address once more.

Concluding Observations

The aforementioned discussion has sought to show that governmental programs and policies have long been an instrumental factor in rural labor market operations. But this involvement has been sporadic and incomplete. Rural labor market problems, with the exception of agriculture issues, have tended to be viewed as simply extensions of urban problems. In some instances, the same problems in urban and rural areas have been amenable to the same policy solutions. But this is not always the case. Similarly, some uniquely rural labor market issues do not receive appropriate attention because they are relatively less consequential to the larger urban sector of the economy. Yet, despite the fact that the labor force and the population of the United States have become increasingly urban-oriented throughout the 20th Century, it is still the case that rural America is a sizeable and critical part of the overall economy.

Thus, the overarching question of the mideighties that confronts the rural economy is who will take responsibility for defining, measuring, and monitoring the affairs as well as for initiating the needed policies and programs for the rural sector? Most of the economic issues raised in this paper have traditionally been seen as responsibilities of the Federal Government, although State and local governments sometimes can play a strong supporting role. But at the Federal level, the overall responsibility for policy guidance of rural economic affairs is difficult to place. In fact, with the exception of agricultural issues, there really is no effective voice or advocate. The U.S. Department of Agriculture (USDA) has at times taken some initiative to address rural nonfarm issues but these instances are too often the exception rather than the rule. Even in agricultural matters, USDA seems to be consistently on the side of employers' interests. USDA-sponsored research tends to be almost exclusively oriented toward agriculture and toward production goals. Little in the way of ongoing research efforts seem to be devoted to the rural nonfarm sector even though this sector dwarfs the farm sector. Obviously, agricultural interests should continue to be a high priority of the U.S. Department of Agriculture, but, if it does truly have responsibility for overall rural economic development, then it should put its overall responsibilities in proper perspective. During the seventies, the Office of Research and Development in the Employment and Training Administration of the U.S. Department of Agriculture sponsored much of the research that identified many of the critical needs of rural workers and assessed the impact of various public policy initiatives on rural labor markets (Robson, 1984). Since 1981, however, this office has been decimated by "penny-wise, pound-foolish" budget cuts. The uncertainty about what is happening to the rural labor force in the eighties only serves again to emphasize the chronic need for the development of on ongoing research strategy to monitor labor market developments in rural America. Some agency in the Federal Government needs again to assume this mantle of reponsibility.

Research alone, of course, is no answer to contemporary rural labor market problems. It can identify issues and, if--as was the case with the U.S. Department of Labor research programs in the seventies--there is an absolute insistence that the research be policy-oriented and not merely "numbers crunching," research should be able to suggest policy options (Robson, 1984). Research needs to be clearly attached to programmatic actions and commitments. Government alone cannot "solve" all the problems of the rural economy but neither can the private sector.

Ultimately, the degree of Government involvement in rural labor markets requires a normative judgment of what makes a "good" society (Clark, 1983). In economic theory, it is easy to say that the efficiency considerations alone would guide the economy and that the free market should be allowed to make the decisions without interference from Government. But in practice, decisions must be made in a social as well as a political climate with economic principles representing only one dimension of human affairs. Reliance on market decisions alone can be cruel, harsh, coercive, and unfair in its outcomes. It has effectively been argued that "justice is the primary virtue of social institutions" (Rawls, 1971, p. 3). Government programs and policies are designed to mitigate the human suffering that would otherwise result from these labor market adjustment pressures. Such interventions are a vital feature of the evolution of American economic history. The legitimacy of Government itself must ultimately be based on its ability to satisfy the aspirations of its citizens over what is considered to be just. Government interventions are not required only in circumstances where the market fails. Rather, the primary role of government in a just society is to be an active agent of social change. The purpose is not to preserve the status quo but, rather, to provide options to citizens with regard to where they live and how they earn their livings. This is the essence of the meaning of the "freedom to choose." It is the philosophy that should ultimately determine the role of government in rural labor markets.

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DISCUSSION

Leonard E. Bloomquist [1]

Dr. Briggs makes a convincing argument that Government has always played an important role in rural labor markets. There have been government programs throughout this country's history designed to achieve rural economic development. Dr. Briggs reviews a long list of these programs, dating back to the Homestead Act of 1862. He also discusses how the monetary and fiscal policies of the national Government have important consequences for rural labor markets. His basic point is that it is not a question of whether Government should play a role in rural labor markets, but of what is the most effective role for Government to play and for what purpose. He goes on to argue that the overarching question in a Federal system of government is: What level of government should take responsibility for programs that affect rural labor markets? Should it be the National (Federal) Government or State and local governments?

I contend that the answer to this question depends on the policy goal of government programs. Different levels of government are better suited for certain policies than other levels. My comments are organized into two parts. In the first part, I develop a conceptual framework for addressing Dr. Briggs's question. The framework proves useful for suggesting the level of government at which different policies should be formulated and/or administered. In the second part, I discuss some research issues concerning the role of government in rural labor markets. The focus throughout is on the twin concerns of this symposium: efficiency and equity in the performance of rural labor markets.

Government Policies In a Federal System

Paul Peterson (1981) distinguishes government programs by whether they have developmental or redistributive goals. [2] Developmental programs are designed to make an area more attractive to capital and labor to develop the productive potential of land and other local resources. By contrast, redistributive programs are designed to ensure greater equality in the distribution of rewards and opportunities than that afforded by the local economy without Government intervention. The programs discussed by Briggs can be contrasted according to this scheme. Rural development and human resource programs are examples of developmental programs. On the other hand, equal opportunity and income support programs or (welfare programs in general) are examples of redistributive programs.

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[2] Peterson (1981: 44) distinguishes Government programs with "allocational" policy goals as a third type. This type of program allocates resources within a local economy without affecting their relative distribution. Examples include police and fire protection and street maintenance. Peterson characterizes these programs as "housekeeping services." In his scheme they make up a residual category, in that these programs are "neither developmental nor redistributive." Since the purpose here is to highlight the contrasting effects of different types of Government programs on rural labor makets, the focus will be on developmental and redistributive programs.

According to Peterson, local governments should not pursue redistributive policies. He claims that doing so would undermine the future developmental potential of a local area, since financing such programs would require higher taxes and thus make a place less attractive to capital and labor, other things being equal. Peterson does believe that redistributive policies should be pursued; however, they are better formulated and funded at the national level. In this way, redistributive goals can be realized without undermining the future vitality of local labor markets.

Peterson's scheme can also be related to the concerns of efficiency and equity in local labor market performance. Developmental policies are primarily concerned with efficiency issues, whereas redistributive policies are concerned with equity issues. The implication of Peterson's scheme is that programs designed to enhance the efficiency of local labor markets should be the primary responsibility of local and State governments. Why? Because of local policymakers' direct involvement in their area. This gives them, on the one hand, direct knowledge of local needs and resources. With regard to rural areas, local policymakers should be less likely to have the "urban bias" that Briggs contends has been a problem with most national intervention policies to date. On the other hand, local policymakers also have a direct interest in enhancing the efficiency of their local labor market, given that their own well-being is tied to its performance.

It seems, however, that local policymakers are not as well equipped to pursue equity goals. For one, there is Peterson's claim that local redistributive programs, which essentially are designed to pursue equity goals, undermine a local area's developmental potential. Moreover, there is Briggs' point that State and local development strategies have unfortunately taken on a "beggar-thy-neighbor" character. Often the effect has been to attract firms from other local areas without really creating new jobs. One area's gain is another area's loss. Finally, it is possible that local policymakers will be tied to "vested interests" within the local status quo. Briggs points out that, in the rural South, local vested interests often encouraged development in industries that would most benefit them without taking into consideration the interests of poor blacks and other disadvantaged groups. In short, they pursued development strategies without giving much weight to equity goals.

There are three major policy implications that can be drawn from this discussion. First, the national Government should be responsible for social welfare and other redistributive programs. Second, developmental programs should be the primary responsibility of local and State government, where efficiency would be more of an immediate concern. Third, the national Government needs to be involved in the formulation of developmental polices as well, to ensure a greater degree of equity in developmental programs. Not only is there the problem of unequal access to resources within local areas, but there also is considerable inequity in the distribution of resources among local areas. Specifically, many local areas are "resource poor" relative to others. This might call for some assistance from the national Government to enhance the developmental potential of these areas in the interest of equity.

Returning to Briggs' question, it is not so much a question of which level of government should take responsibility for rural labor market performance, but what kinds of goals the different levels can pursue most effectively. The key, therefore, is not in assigning primary responsibility to a particular level of government, but in effective coordination of the actions of different levels of government.

Effective coordination in turn requires reliable information. As Briggs points out, however, the information available on rural labor markets is woefully inadequate for this task. To remedy this situation there needs to be more research on the performance of rural labor markets. Of course, a major purpose of this symposium has been the identification of research issues for the Economic Research Service to investigate. I would therefore like to close my comments by suggesting some research issues that can be inferred from Briggs' paper and the general discussion.

Research Issues

I have identified four broad sets of research issues concerning the role of Government: (1) How can policymakers, especially national policymakers, be better informed about developmental needs of rural areas? (2) What effects have Government programs had on rural labor markets in the past? (3) To what extent have equal opportunity goals been realized in rural labor markets? (4) What are some developmental strategies that local policymakers have taken? Following are some specific issues that could be addressed within each set.

Information Needs

A clear implication of Briggs' paper as well as of the general discussion, is that national policymakers need more complete information on rural areas. First, better measures of economic hardship in rural areas are needed. Briggs points out that the most commonly used measure of economic hardship, the unemployment rate, is not as reliable for rural areas as for urban areas. A major reason for this is the greater degree of seasonal employment in rural areas, due to the seasonal demand for labor among many rural industries (with agriculture being a prime example). The number of weeks unemployed in a year rather than just the percentage unemployed at a given point in time would seem a more reliable measure of economic hardship in rural areas. Briggs calls for an even broader measure, a measure of underemployment. The latter would include not only the number of weeks employed (or conversely, unemployed) in a year, but also whether area residents' jobs are below the skill levels that they possess. He further contends that underemployment is much more prevalent in rural areas than in urban areas. To investigate this contention it is necessary to obtain the best information possible on underemployment in local labor markets.

Second, policymakers need to know more about variance in rural employment structures. Briggs notes considerable variance in the employment structures of rural areas. He argues that rural developmental policies should be sensitive to this, and rightfully so. Previous research has developed typologies of rural labor markets (see Horan and Tolbert, 1984; Ross and Green, 1985). It would be useful to incorporate these and perhaps other typologies into research on rural labor market performance. The purpose would be to investigate how different types of rural labor markets differ in terms of underemployment, labor force participation, income inequality and so on. This would enable policymakers to target programs for particular areas, depending on characteristics of the local employment structure.

Effects of Government Policies

Another set of research issues is the effects of Government policies on rural labor markets. One important issue in this regard is the effects of national and fiscal monetary policies on rural areas. Briggs and others participating in the symposium claim that current policies have been a "disaster" for most rural areas. They express the belief that areas dependent on agriculture and export manufacturing have been especially hard hit by the national economic policies of the last few years. Then there is the other side of the coin: Are there any rural areas that have been favorably impacted by recent fiscal and monetary policies? This would seem to be the case for those dependent on defense industry employment, although Briggs notes that most of this type of employment is concentrated in urban areas. There also is the question of the importance of industrial diversity as a "buffer" for local areas when national economic policies change.

Better information on specific development programs is needed as well. For instance, Briggs contends that public employment programs have been quite successful in rural areas. Assuming this is true, research on the kinds of activities that would be good for public employment would seem to be in order. One important question in this regard is whether these programs should be modeled after the New Deal's Work Progress Administration (WPA) and the Civilian Conservation Corp (CCC) with their goal of refurbishing an area's infrastructure. Perhaps a more appropriate goal in the present context would be provision of certain services, like ambulance service and other emergency medical care. Many rural areas do not have the population density to support such services through their private sector, although they would most likely benefit from them. It would be useful to evaluate programs that provide these services more closely. However, public employment has been all but eliminated in recent years, so it may be difficult to collect this information.

Finally, there is the issue of what kinds of government programs would be most effective at generating employment in the private sector. Briggs claims the Job Opportunities in the Business Sector (JOBS) program has been effective in this regard, although he stresses it is "procyclical," meaning that businesses tend to participate in it only during expanding periods of the business cycle. It also is important to consider what kinds of programs might facilitate job creation under less favorable economic conditions.

Equal Opportunity In Rural Labor Markets

The basic issue regarding equal opportunity programs is the extent to which equal opportunity for women and minorities has been realized in rural areas. There are two points of comparison that could be incorporated into an investigation of this issue. For one, we need to know how rural and urban labor markets compare in the realization of these goals. Briggs and Tienda both suggest that rural labor markets have lagged behind urban labor markets in this regard. It is important to document the extent to which this is true and to investigate possible explanations of the difference. The issue of regional variation in the degree of equal opportunity also needs to be addressed. Most believe that equal opportunity goals have not been realized in the South as much as in other regions, but we should examine this issue carefully, and not just assume that the South lags behind the rest of the country in the extent of equal opportunity afforded to women and minorities.

Local Development Strategies

The final set of research issues concerns the development strategies pursued by local and State policymakers. The first task is to document the different kinds of local development strategies that have been pursued. The next question to be addressed is how effective have these strategies been at realizing their goals? Can it be established that some strategies are clearly more effective than others? A related issue is whether there are strategies that have not ended up being "beggar-thy-neighbor" programs. If so, it would be important to document their existence and analyze the conditions under which they have been implemented. There also is the question of whether local strategies vary by region. Do Southern policymakers pursue strategies that are different from those pursued in the Northeast and North Central States? Are the strategies of Western policymakers distinctive as well? And, assuming that regional differences are found, how responsive are these strategies to local labor market needs?

Conclusion

Let me conclude by returning to the twin themes of the symposium: efficiency and equity in the performance of local labor markets. Just as these themes have been underlying concerns of the symposium, they also should be underlying concerns of research on Government's role in local labor markets. On the one hand, research on government programs should be concerned with the efficiency of a program at meeting its goals, however defined. On the other hand, research should also be concerned with who benefits from a program. The latter should address not only whose needs the program was designed to meet, but also whose interests are served by the unintended consequences. For example, a rural development program could be associated with a housing shortage in an area, due to rapid population growth. Similarly, it could lead to greater demand for day care facilities if a consequence was increased labor force participation of women. By identifying unintended consequences of Government programs, we can assess not only how effective a program is at enchancing efficiency and/or equity in rural labor markets but also begin to understand how Government can play a more decisive role in achieving these goals.

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CONCLUSION

The symposium provided a forum for the exchange of ideas and knowledge about rural labor markets from a variety of perspectives. Its purpose was to help researchers at the Agriculture and Rural Economics Division (ARED) of the Economic Research Service develop a research agenda for studying rural labor markets. The discussions in each of the four sessions raised numerous interesting and timely research questions; many of which ARED will certainly want to incorporate into its investigations of rural labor market performance. What follows is a synopsis of the recurring themes of the symposium.

Diversity in Local Labor Markets

Perhaps the most frequently expressed idea in the symposium is the tremendous diversity that exists among local labor markets. The authors of the papers have focused on differences between rural and urban labor markets, (or between nonmetro and metro markets). The discussion also highlighted how, in the aggregate, rural areas are becoming more similar to metropolitan areas on such variables as earnings and the industrial and occupational structure. However, researchers must guard against using this information to conclude that a convergence of the rural and urban areas is occurring. For there is considerable diversity among rural areas on these same variables. Recognizing the diversity that exists among the rural labor market areas would increase the information available to policymakers and planners. The implication is that labor market performance should be analyzed within a local context, that is, within the geographical area that people live and work.

Measurement Issues

Recognition of this diversity further implies a greater sensitivity toward measurement issues than is often true for analyses of labor market performance. For example, the most commonly used measure of economic hardship in local areas is the unemployment rate. However, Tweeten and Briggs both argue in their papers that the unemployment measure was less adequate for rural than urban settings. Rural workers, relative to urban workers, tend to be underemployed rather than unemployed. Since official unemployment statistics do not reflect the degree of underemployment in a local labor market area, the extent of hardship in rural areas is underestimated. It is important to devise reliable measures of underemployment that can be incorporated into research on rural labor market performance. Researchers should also investigate how underemployment varies among rural labor markets and seek to understand the causes of this variance.

Another measurement issue implied by the theme of diversity is how to identify local labor market areas. The general consensus of symposium participants was that Wilbur Thompson's (1965, p.67) definition of a local labor market as "the area bounded by the commuting radius around a district of concentrated employment opportunities" is a useful starting point. An important first step, therefore, is to decide upon an appropriate methodology for delineating commuting radii of local labor market areas. 1/

Sources of Diversity

Once local market areas have been delineated the next step is to investigate sources of diversity among local labor markets, with particular emphasis on rural labor markets. A frequently mentioned source of diversity was the geographically uneven distribution of industries. Industrial sectors differ by past growth and future potential and, as Kale points out in his paper, rural labor markets are often characterized by dependence on slow-growth or even declining industrial sectors. Agriculture is an obvious example, but it was also pointed out in discussion that many of the manufacturing industries that have located in rural areas are increasingly subject to foreign competition.

In addition, there is the issue of what the emerging service economy implies for rural labor markets. Many rural areas have experienced employment growth in service industries. Kale argues that more detail is needed on the importance of services to growth and stability in rural labor markets. He notes that the conventional view of service jobs as part of the "nonbasic" sector needs to be revised. Many service industries can be considered "basic," in that the services they provide bring income into a local economy. Tourist industries and those that serve retirees (with their social security and pension funds) would be good examples of "basic" service industries. Little is known about the short-term and long-term effects of dependence on this type of service employment on rural labor market performance. Researchers, policymakers, and planners need to be more aware of the types of service employment available in rural areas and how service jobs compare with other types of employment.

Kale discusses other sources of diversity as well. In particular, rural labor markets vary by regional location in addition to metropolitan proximity. As a rule, rural labor markets in the South and West have experienced greater job growth than those in the Northeast and North Central regions. He also notes considerable diversity among local markets within each region. As for metropolitan proximity, except for a brief period in the early seventies, most of the rural job growth has occurred in areas relatively close to a metropolitan areas. Yet another source of diversity is the demographic structure of rural labor markets. Briggs points out that racial minorities make up a sizeable proportion of the rural labor force in the South and Southwest. Thus, analysis of labor market performance in these regions must be sensitive to the presence of an ethnically diverse labor force. There also is considerable variance in the relative proportions of elderly in local labor market areas. It is important to investigate the possible effects of a high proportion of elderly residing in a local labor market area on labor market performance.

1/ Actually, as of this writing, the decision has already been made. Charles M. Tolbert II of Florida State University has used the method of cluster analysis to delineate local labor market areas for the entire United States based on 1980 journey-to-work data. The delineation in turn has served as a sampling frame for a special Public Use Micro-Sample (PUMS-D) of the 1980 Census of Population and Housing. This research was funded in part by ARED, in conjunction with the Cooperative Regional Project S-184.

A final research issue that grew out of the discussion of diversity is the extent of industrial diversity within local labor markets. The presumption is that dependence on a single industry can be detrimental to labor market performance, at least in the long run. As Deaton points out in his paper, dependence on a single industry, let alone a single firm, implies high risk. A frequent discussion topic was the current plight of agriculture-dependent areas, given the severe farm crisis. The similar problems faced by small manufacturing towns that have had plant shutdowns was also noted. Most agreed that rural policymakers should encourage development of a diverse economic base for their labor market area. However, some pointed out that little research has actually been done on the relationship between industrial diversity and labor market performance. ARED was urged to investigate this relationship systematically.

Complexity of Effects

Another recurring theme of the symposium discussions was the complexity of the forces that affect local labor market performance. For example, Deaton and Kale stressed the increasing sensitivity of rural labor market performance to changes in the world economy. Briggs discussed how national macroeconomic policy have significant effects on rural labor markets, while Tienda analyzed the effects of sectoral trends on labor market performance. Finally, Tweeten and Briggs both evaluated the effects of Government market-related institutions like job-placement agencies and training programs.

At one point in the general discussion it was suggested that the myriad of possible effects can be organized into five levels: (1) effects of macroeconomic forces, like interest-rates or foreign competition; (2) effects of national sectoral trends, like declining agricultural prices or growth in high-tech and service industries; (3) impacts of labor market-related institutions, like Government or private employment service agencies; (4) the influence of firm-specific characteristics, like organizational size or management techniques; and, (5) the role played by household characteristics, like the number of family wage earners or strength of kinship ties to the local area.

It is doubtful that labor market reseachers can investigate the role that all of these factors play in affecting the performance of local labor markets. They need, however, to be sensitive to this complexity when interpreting their research findings. For example, before concluding that the current farm crisis, with the large number of farm foreclosures, is the result of declining agricultural prices (level 2) or foreign competition (level 1), researchers and policymakers should be careful not to rule out the possibility that some failure is simply the result of poor judgment or mistakes on the part of enterprise management (level 4). Similarly, Deaton contends that the growth of off-farm employment among farm households (level 5) has enabled some farm families to maintain their farms during a period of rapidly declining agricultural prices (level 2). In other words, this framework should aid ARED researchers to sort through what may at first seem like contradictory findings to provide policymakers with coherent analyses of the factors that influence the performance of local labor markets.

Efficiency and Equity Concerns

Efficiency and equity are fundamental issues in labor market analysis. The ideal, of course, is for a labor market to be both efficient and equitable, although the contradictory relationship between these two goals seems to require a tradeoff, or compromise, between them. Tweeten notes that an efficient labor market is not necessarily equitable in providing justice or fairness to everyone. Workers who bring little or no human resources to the labor market would bring little or no earnings home. By contrast, an equitable labor market would provide a decent job at a decent wage to anyone who wants one. This implies that workers have little incentive to be productive in such a market because they are assured of a job regardless of performance. Tweeten argues that no Government can pursue for long either pure efficiency or pure equity goals, for a singular pursuit of one will ultimately create social problems viewed from the other. The problem with policies concerned only with efficiency goals is that they tend to overlook the well-being of some citizens. By contrast, sole pursuit of equity goals tends to remove incentives for efficient use of resources.

While the tradeoff between efficiency and equity goals seems fairly clear in the abstract, empirically it often is difficult to distinguish between the efficiency and equity implications of a particular aspect of labor market performance. For instance, discrimination in a labor market can be interpreted as evidence of inefficiency as well as inequity. Most researchers and policymakers regard discrimination as an equity issue, implying that the lower earnings that women and minorities receive relative to white men is unfair. But discrimination can also be regarded as an efficiency issue, particularly if the focus is on differential returns to human capital investment. If women and/or minorities receive lower returns to their investments in human capital than white men, then this would indicate the existence of arbitrary restraints on labor market transactions. According to Tweeten, the existence of such arbitrary restraints implies inefficiencies in labor market performance. 2/

There is a similar ambivalence in other indicators of labor market performance. For example, a high level of unemployment (or underemployment) in a labor market implies inefficiency, in that the market is unable to provide enough jobs to match the labor supply. This would be especially true if the high level of unemployment persisted over a long period of time, and thus could not be viewed as the market making an adjustment to a temporary disequilibrium in the intersection of demand and supply factors. On the other hand, a high level of unemployment could be interpreted as evidence of inequity, since it would imply that a sizeable proportion of those seeking employment are denied the opportunity.

Other examples could be discussed, but by now the point should be clear. Issues of labor market performance cannot be neatly classified as either efficiency or equity issues. What this implies is that the appropriate "mix" of efficiency and equity goals is essentially a moral, or philosophical, issue. As Briggs puts it in his paper, resolution of

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2/ Tweeten does not explicitly state that an efficient labor market is free of discrimination by sex and race. He does, however, state that an "efficient market is free of arbitrary restraints such as sex, race and religious bias.... An efficient labor market would be apparent in equal pay for equal work" (p. 6).

this issue requires a normative judgment about what makes a "good" society. Research can, therefore, provide information only on the extent to which a given goal has been met, and not on whether one goal is more appropriate than another. Briggs insists there still is an important role for research to play; it is just that research cannot provide definitive answers to some basic questions about labor market performance. What, then, are some questions that research can address, and how could it aid the formulation of policy on labor market performance? That is the subject of the next section.

Research and Policy

Research can aid the formulation of policy in two ways. First, it can provide basic information on the nature of local labor markets and the factors determining their performance. A useful starting point would be documentation of the different sources of diversity among local labor markets, as discussed above. In addition, research should seek to specify the complexity of effects that determine local labor market performance. Some specific research issues underlying these themes have already been discussed, and thus they will not be repeated here. It should be noted, though, that these issues essentially constitute basic research: the research focus is on producing information on the nature of local labor markets that may not be directly relevant to specific policies or programs. The purpose would be to develop a more complete understanding of local labor market performance, an understanding that policymakers may or may not incorporate into their decisions. That will depend on the relevance of this information to their normative judgments about what constitutes "good" labor market performance.

Second, research can provide information on the effectiveness of particular programs at meeting their policy goals. Although none of the papers placed great emphasis on the need for evaluation research, this was a major theme of the general discussion. Moreover, this research should be sensitive to both efficiency and equity concerns, even (or perhaps especially) if a program is designed to meet only one of these goals. For example, research evaluating programs designed to achieve local economic growth should analyze whether the benefits of growth are equitably distributed. Indeed, Deaton argues that the issue of whether there can be "growth with equity" should be a major focus of research on local labor market performance. Conversely, evaluations of "comparable worth" programs should address the issue of the effects of these programs on economic incentives for the different groups affected.

The primary role of research in policy formulation, therefore, is not to provide definitive answers to complex and value-laden questions about labor market performance. It can, however, serve an invaluable service to policymakers by enhancing their ability to make informed decisions about how to enhance labor market performance. There is an especially pressing need for research on performance of rural labor markets, since a recurrent theme of this symposium has been how little we know about rural labor markets and their performance. The mark of the symposium's success will be the extent to which it inspires research on rural labor market performance among ARED staff as well as others. It was the judgment of symposium participants and hopefully of readers of these proceedings that the symposium has accomplished just that.

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